ENGINEERING NEWS-RECORD

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The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • JULY 10, 1941

All contract records fall as new defense year begins

This week sets an all-time high of $298,718,000. Six-month total and weekly averages also top all previous marks. New capital is five times last year's figure

As the second year of our defense effort got under way this week the construction industry witnessed history repeat itself insofar as contract awards are concerned. All-time record totals were again chalked up. The beginning of the first defense year in July, 1940, was heralded by a $98,000,000 week (as compared with $50,000,000 or $60,000,000 per week previously) and this was followed by a $217,000,000 week as the program accelerated. Only in 1929 when there were two $160,000,000 weeks, and in 1930 when there was one of $182,000,000, had these figures been approached. But this week, one year later, breaks all of these previous records with a total of $298,718,000. This is 25 per cent higher than the previous record established Oct. 17, 1940, and is piled on top of a June in which the weekly totals averaged $147,000,000, also a new record. And as if this were not enough, the total for the first six months of 1941 reached $2,841,403,000, nine percent over the previous record made in the second half of 1940.

That there is still more to come is indicated by still another record—the total amount of new capital for the year to date. This stands at $4,917,760,000, a 483 percent increase over the comparable period last year. As a matter of fact, this 28-week volume of new capital is 26 percent higher than the entire 52 weeks of 1940, heretofore the highest year.

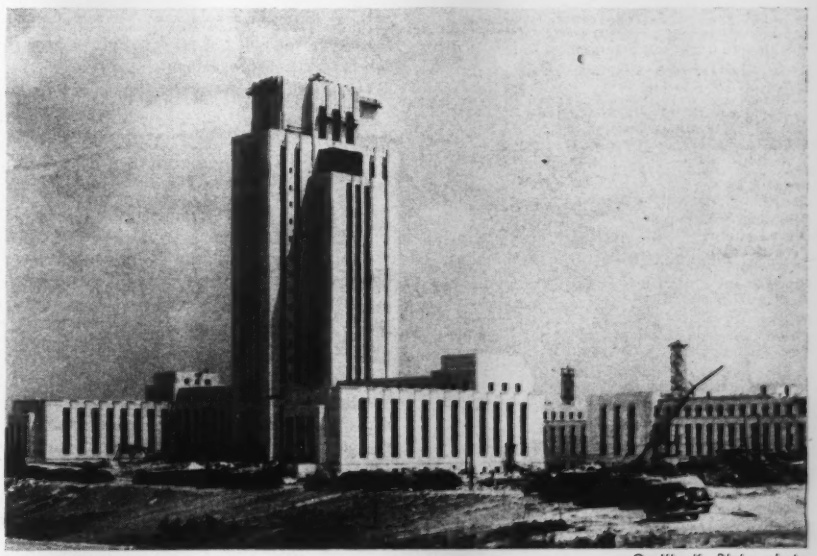
The current week's total of $298,718,000, which breaks all previous engineering construction contract totals reported by *Engineering News-Record*, contains $242,368,000 of federal money, $28,707,000 of state and municipal, and $27,643,000 of private. Most of the total is accounted for by nearly $175,000,000 of public buildings and over $72,000,000 in the unclassified category. Even with these tremendous sums eliminated, the remainder, spread over waterworks, sewerage, bridges, highways and the like, is up to the average week recorded before the defense program started.

In the "Jobs of the Week" section on p. 12 there are given a few of the larger projects among the 109 awarded this week that exceeded a half million dollars each. Two big ones not given there are a $15,000,000 Air Corps depot at Wellston, Ga., and a $7,000,000 proving ground at Hope, Ark.

Another $300,000,000 for defense housing requested

An additional $300,000,000 for defense housing was asked of Congress by the President last week. This would bring to a little over $750,000,000 the sums so far made available. The new money would provide about 75,000 additional dwelling units.

Housing Coordinator Palmer said some weeks ago that 125,000 dwelling units were needed, to cost $500,000,000, and the President said in his note to Congress that his $300,000,000 request would cover only the most immediate requirements and would not meet all the needs in sight. A request for at least another $200,000,000 is, therefore, expected within a few months.



Orville K. Blake photo

Naval hospital to be completed this fall

Now three-fourths complete, the $4,850,000 naval hospital under construction at Bethesda, Md., a suburb of Washington, D. C., is expected to be finished late this fall or early in the winter. The hospital is located on a 265 acre tract to provide quiet, sunlight, and a restful outlook for the patients in the 20-story structure. The main tower, which will be topped by an airplane beacon, will be surrounded by three and four story wings.

Precast exposed-aggregate slabs are being used for trim throughout the main building and for structural outside finish. Construction of the building was begun in June 1940 and except for the steelwork, contracted for by American Bridge Co., the building is being erected by John McShain, Inc., Philadelphia. The hospital was designed by the Bureau of Yards and Docks with Paul Cret as consulting architect.

PRIORITIES GUIDEPOST

Current notes on what, who and how

Fundamental document governing the operation of the priorities system is the priorities critical list. Revised monthly, it now covers about 300 items that the Army and Navy buy and on which there is some degree of scarcity. Whenever the Army or Navy buys anything on the list, the purchasing officer may attach a preference rating to the order. This rating will direct the supplier to fill the order on the scheduled delivery date, even though he has to defer delivery on other orders which have no preference rating or a lower one.

Of more immediate significance, whenever a construction contractor for the Army or Navy needs to buy any item on the list, he can have a rating attached to his order. To do so, he should apply to the officer in charge of his contract.

For the non-defense buyer, of course, items on the critical list are difficult to get. All metals except a few precious ones are now on the list. Other critical list items follow:

Aircraft laboratory and test equipment
Angledozers: tractor powered
Auger: earth (power)
Autoclaves (laboratory)

Barges
Boats: crane; motor launch; lighters
Booms
Bridges: foot; steel (portable); pontoon
Battery chargers, portable
Bull-dozers: tractor powered

Cable, electric and telephone
Carts: hand drawn; reel
Chlorine
Compressors (air): power driven
Containers: galvanized
Control equipment for electric motors, automatic
Cordage and twine
Cranes
Cylinders: compressed gas or air

Diamond point tools
Diesel engines
Diving apparatus
Drydocks: floating

Explosives
Extinguishers (fire)

Flares
Floodlighting equipment
Fuel: Diesel, 50 cetene number and up

Generators, electrical
Grader, road: self-propelled

Hammers, power driven
Hoists, power or hand

Instruments: surveying, drafting
Insulating, fire brick

Lighting equipment: electric (portable)
Locomotives; diesel; gasoline; electric
Lubricant: Diesel engine, "RPM", "Delo" etc.

Machine, blasting
Machine and metal working tools
Machinery: power-driven, for casting, cutting, grinding, hoisting, melting, metal pressing, welding, refrigerating
Motors, electric, except fractional horsepower

Oil: castor and fuel (diesel 50 cetene and up)

Pumping sets
Purification unit: water

Reproduction equipment: map

Scrapers: tractor drawn
Sextants, navigation
Ships: all types
Stoves: tent

Theodolites
Thermometers, industrial
Tools; hand, precision; portable, power-driven

Welding rod

Photo by British-Combine

Air raid shelters for British industrial workers

Workers in vital British war plants are now having their air raid shelters brought to them. The new "Raidsafe" movable shelters have been designed in consultation with government experts to provide last minute protection in factories where production must often be maintained even during air attacks. Much valuable time has hitherto been wasted in getting to and from larger shelters outside the plant, but now the workers will be able to take cover in a few seconds.

The movable shelters are blast and splinter-proof, being constructed of 12 in. reinforced concrete, and capable of withstanding tremendous debris loading. The shelters are constructed in sections, similar to our American heating radiators, so their size can be increased or decreased in accordance with requirements at the plant. The sections are held together by four tie-rods as shown at top and bottom in above illustration. Eye-bolts are inserted at the top of each section for use in lifting. The rectangular peep-holes just above the doorway are for fire observation.

Michigan road builders protected on materials

The attitude and policy to be followed by the Michigan State Highway Department toward contractors experiencing difficulty in obtaining materials for state projects has been announced by G. Donald Kennedy, state highway commissioner. Where a contractor is unable to complete a project because of shortage of material, the department may delete such portions of the contract as cannot be completed within a reasonable time. However, the commissioner warned, the state will not adjust any contract prices upward because of delays or expenses in obtaining materials or other emergency conditions beyond the department's control. If it is found necessary to cancel any contract, payment will be made on all completed work and the contractor will be paid cost plus 15 per cent for all materials on hand. Because of the threatened shortage of steel the state will not permit a contractor begin a project until he has all the necessary reinforcing and other steel items on hand. As most steel products are now on priorities, the state will endeavor to get steel priorities on all projects designated as of defense value or part of the strategic military network.

• • •

Authorize design work on new Tacoma Bridge

The Washington State Toll Bridge Authority last week authorized the state highway director to prepare plans for a new span to replace the $6,000,000 Tacoma Narrows suspension bridge which collapsed last November.

The action was taken to expedite reconstruction of the strategically-located bridge as soon as financial arrangements can be perfected. The state's $5,200,000 suit against 23 insurance companies on the collapse of the span is pending in Pierce County superior court at Tacoma.

Governor Arthur B. Langlie, chairman of the authority, authorized the expenditure of $75,000 for engineering and other expenses incidental to designing the new bridge. Preliminary work already has been done by the highway department.

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Training of engineers for defense provides keynote for S.P.E.E. meeting

The place and teaching of science and technology in the engineering curricula held vital for the future

Attendance at the 49th annual convention of the Society for the Promotion of Engineering Education, which met at the University of Michigan, Ann Arbor, June 23–27, was reduced by the defense training work in which many of its members are engaged, and a report estimated that between 1,100 and 1,200 society members were unable to attend for this reason.

In view of present conditions the dominant note of the convention was national defense, particularly engineering training to meet the demands for more and more highly trained engineers in defense activities.

Dean R. A. Seaton, director of Engineering Defense Training, U. S. Bureau of Education, presented a most favorable report on the work done during the past year under a federal appropriation of $9,000,000, and stated that an expanded program with an appropriation of $17,500,000 was anticipated. He outlined the history of the E.D.T. and said that the results were gratifying to both industry and the schools in which it is operating.

Dean A. A. Potter, Purdue University, reviewed the organization of the E.D.T. under eleven regional advisers. Said Dean Potter, "At the outset it was agreed that the E.D.T. must not interfere with the normal undergraduate and graduate courses of the technical schools and had opposed any acceleration, at government expense, of the graduation of the class of 1942." Following Dean Potter's talk, Dean George W. Case, University of New Hampshire, gave details of the needs of industry for E.D.T. students.

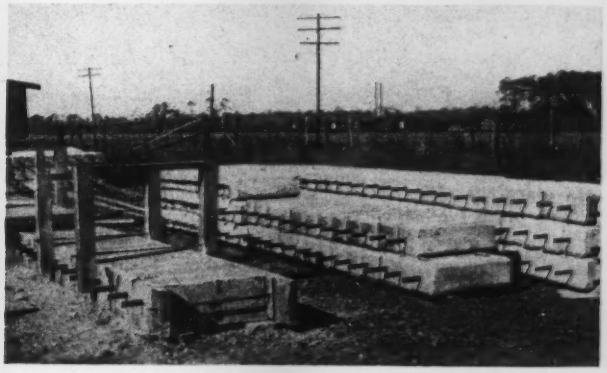
President W. M. Lewis, Lafayette College and director of selective service in Pennsylvania, speaking on "Engineering Education and National Defense" at the annual dinner, pleaded for "hard-headed" and not merely "wishful" thinking. He emphasized the solidarity of the country and said harmony between industry and labor requires long-distance planning for research and for trained personnel. The after-war period will require the "brotherhood of man" to solve the problem. President W. E. Wickenden, Case School of Applied Science, amplified the views previously expressed and discussed the need for specialized education of men for supervisory tasks. He claimed the shortage of such men was due primarily to the lack of technical institutes as an intermediate step between high school and college.

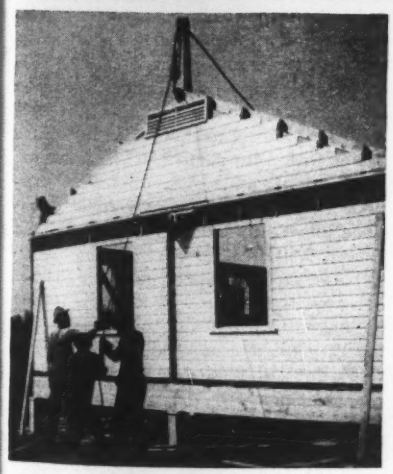
Commissioner W. D. Binger, New York City; Prof. C. B. Breed, Massachusetts Institute of Technology, and Major E. W. Rydings, designated the protection of civilians in war time as a first-line defense, but one which must not take the materials needed for military purposes. Preparation for protection is needed in transportation, sanitation and public health, power, structures and in emergency control. Professor Breed advocated experiments in the control of strategic highways which could be taken over by the army for short periods of time.

It was the consensus of opinion that those places most likely to be attacked should be selected first in developing any scheme for civilian protection. It was agreed that at least a year would be required to put any protective plans into effect and that such plans could be most easily carried out through existing city departments.

The second theme most dominant in

(*Continued on page* 13)





Prefabrication cuts cost of USHA farm houses

Partial prefabrication is being used on a USHA rural housing project in Thomas County, Ga. Procedure, which was developed by the contractor, Prince E. Jinright of Thomasville, is to assemble wall panels and roof trusses at a central carpenter shop and truck them to the site. Floors and roofing are applied at the site. The houses are founded on concrete piers precast at the central shop.

USHA's rural program differs from its urban housing in that the houses are scattered all over the county, each one located on the farm of the family which will rent it. Prefabrication is therefore particularly valuable, since it would not be economical to set up power machinery at the sites.

Mr. Jinright is building fifty houses. They are five-room one-story structures 24 ft. by 36 ft. Wall sections are built at the shop, each 12 ft. long and 8 ft. high. Panels are wood frame, with drop siding over building paper on the outer face and tongue-and-groove vertical on the inner face. The gable ends, with a louvre, are also shop-built. The floor, shingle roof covering, and fibre-board ceiling are added at the site.

USHA has about $16,000,000 available for rural housing, which will provide about 7,900 dwelling units. Work is underway on projects costing $6,000,000. Average cost of houses is running about $1,600, according to the records of this federal agency.

Innovations dot Navy's ship mod

As many as 10 members intersect at several of the towing carriage's spherical joints. This is a full size test section of carriage framework. Tubing is mostly 4 in. diameter and spheres are of two sizes, 8 and 10 in. external diameter, with 3/8 in. shells.

For leveling and setting the 12-ft. chair four transverse and two longitudinal precision spirit levels were mounted as shown and the chair's position shifted by fine thread nuts and spherical washers on the eight track bolts supporting the chair. The two dial micrometer instruments for placing the chair in correct vertical position are shown on the bench at the extreme left of the photograph.

FEW ENGINEERING projects have ever recorded as many individual innovations as can be listed for the Navy's David W. Taylor Model Basin at Carderock, Md. Planned to provide the world's outstanding facilities for determining hull and power plant characteristics of naval vessels, the project includes two principal buildings—an enclosure for two 1,200-ft. long canals or basins in which ship models can be towed, and a two-story and basement building that provides shop, laboratory and office space. Exclusive of numerous new mechanical designs, the following civil engineering features are notable:

(1) The basin enclosure is a three-hinged concrete barrel arch of 112-ft. span, in which the hinges are of the articulated Mesnager type, used here for the first time in this country.

(2) The administration building framing is designed as a series of multi-story concrete rigid frame bents.

(3) Precast exposed white-quartz aggregate panels constitute the exterior surface of the concrete walls of the administration building; they were used as forms during construction, and 1 in. of their 2-in. thickness was figured in the wall's effective section.

(4) Models or full scale pilot installations of all novel elements were utilized to check design calculations.

(5) A new spherical type truss joint was utilized in the towing carriages.

(6) Four lines of rail (total length 5,000 ft.) upon which the towing carriages operate were laid to an accuracy measured by 0.005 in. tolerance from the curvature of the earth.

The last two of these unusual developments are illustrated on these pages.

Special joints

The problem posed by the design of the towing carriages was to secure a structure of extreme rigidity, both to reduce deflections and to raise its natural vibration frequency above any possible resonance with the propelling machinery when the towing carriage is moving at speeds up to 20 mph. Out of this problem there was evolved a new structural form, which for want of a better name may be called a spherical joint. The carriages of which there will be three, two of 53-ft. span and one of 20-ft. span, consist of welded tubular framework, and the hollow spheres were the only practicable means for handling the multiple intersections of members at the joints. One member, such as the chord of a truss, runs through these spheres, but the other members are merely welded to the sphere surface. A principal advantage of the spherical joint is that it requires a minimum of welding at the joint, with consequent reduction in locked-up stresses, time and costs. The carriages were fabricated by Machinery Builders, Inc., Long Island City, N. Y.

Rails follow earth's curvature

The 5,000 ft. of rail upon which the ship model towing carriages run are laid to an accuracy in both horizontal and vertical alignment never before attempted. Vertically the tops of the finished rails have to lie concentric with the still water surface in the basins (in other words, concentric with the earth's curvature) within a variation of plus or minus 0.005 in. throughout their 1,200-ft. lengths. Horizontally, the sides of the rail heads must be parallel to the center line of the basins within the same 0.005-in. tolerance. And not only must these alignment variations be thus precise but vertical deflections under any carriage wheel shall not exceed 0.001 in.

To attain these spectacular results, the basin walls that support the rails rest on an unyielding natural rock foundation; the rail accessories are unusually elaborate; the rail sections themselves are of a special heavy section (165 lb. per yd.) whose surfaces were finish-machined after being flame treated to insure a fine-

sting basin

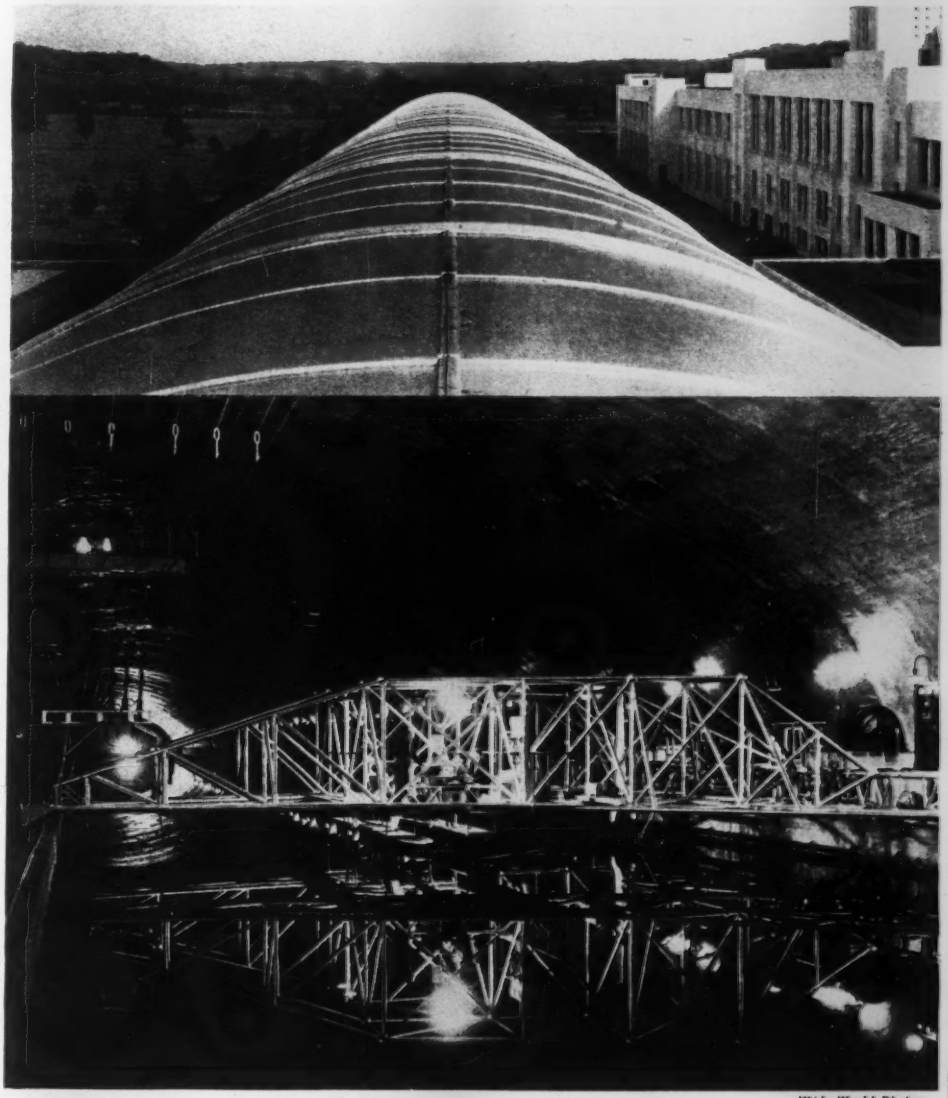
grained, wear-resistant surface; and the rails are fastened down by 15,000 bolts passing through holes drilled in the rail bases. Most important perhaps was the installation of the rail supporting castings or chairs for which three sets of coordinates on each of the tracks had to be established to assure accuracy in spacing, alignment and leveling; this work was done to a maximum variation of only 0.002 in. to be sure that the final rail installation would not exceed the stipulated 0.005 in.

The track structure design is shown in the accompanying illustration. The chairs, of high strength cast iron, are alternately 12 and 4 ft. long attached to anchor bolts by upper and lower nuts and spherical washers. The tops of the chairs are tapped for a pair of studs every 8 in. along the track, for holding the rails. In addition to the precision required in machining the chair surface, unusual care was required when installing them so that they would neither bend nor move under load. This required a practically shrink-proof grout under the chairs and a full and effective bond with the basin wall concrete of the ballast concrete that encloses the chairs.

The rails themselves are, as stated, of special section. The base of the rails was made 7 in. wide and 1 in. thick to permit bolt holes to be drilled through it. To avoid battering of rail ends they were cut with a miter of 45 deg. so that a carriage wheel passes onto one rail before it entirely leaves the preceding one; the bases, on the other hand, are cut square, so that when expansion occurs the bases will come together before the heads touch. Each rail was ground individually, before it was laid in the track, by a special traveling-wheel grinder purchased for the laboratory. This grinder could accommodate a full 33-ft. rail.

Despite the accuracy of chairs and rails, shims and liners were employed to bring the track to precise level, partly because volume changes in the concrete of the basin wall will continue for many years and must be compensated for, and partly because the chairs themselves may move.

The design of the David W. Taylor Model Basin buildings stemmed directly from Rear Admiral Ben Moreell, chief, Bureau of Yards and Docks, while the equipment is due largely to Capt. Harold E. Saunders, of the Bureau of Ships, and technical director of the David W. Taylor Model Basin.

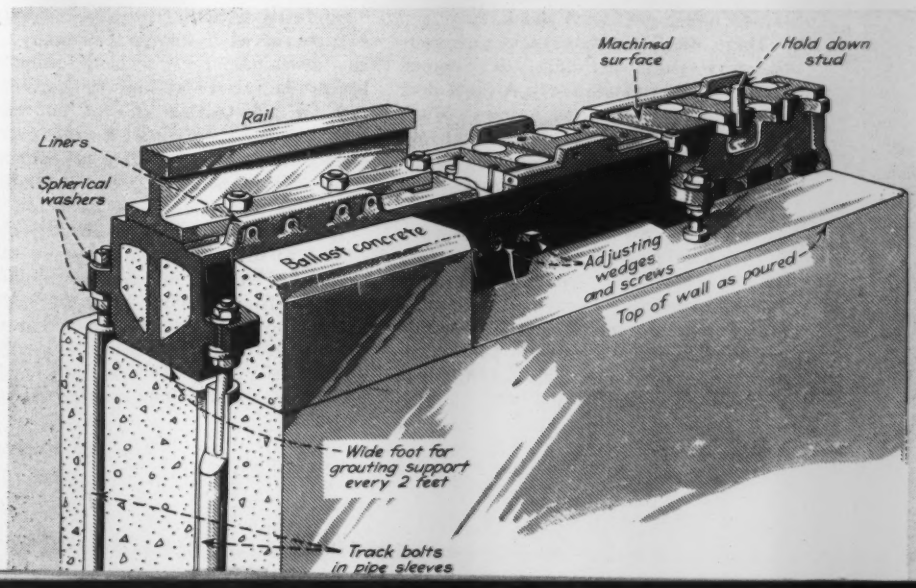


Wide World Photos

Under the barrel roof shown at the top, a Mesnager-hinged concrete arch, are the two towing basins of the Navy's David W. Taylor Model Basin. At the right is the reinforced-concrete office, shop and laboratory building, which is faced with precast exposed aggregate slabs. Similar slabs, depicting famous Navy ships in colored aggregate, decorate the walls of the office lobby.

Immediately above is shown the towing carriage of 53-ft. span (72x56 ft. in plan and 10 ft. deep) made up of tubular members welded to spherical joints. A ship hull model is shown in position beneath the dynamometer bay of the carriage.

Directly below is illustrated model of track structure showing component parts that assure an accuracy of line and level never before attained.



Small quake damages Santa Barbara, Calif.

Short duration of movement confines damage to cracked building walls and water main breaks

Special Correspondence

The earthquake which occurred in Santa Barbara at 11:53 p.m. on June 30, 1941—one day after the 16th anniversary of the disastrous quake of 1925—caused no deaths nor serious injuries, but resulted in property damage that may aggregate $200,000. Although this amount is relatively small and is largely accounted for by cracked building walls and broken water supply mains, it does not measure the severity of the shock, which F. P. Ulrich, chief, Seismological Field Survey of the U. S. Coast and Geodetic Survey, estimates was on the order of VII or VIII modified Mercalli scale. Preliminary reports indicate the tremblor was felt over an area which could be circumscribed by a 200-mi. circle, but property damage was confined to a radius of about 30 miles from Santa Barbara. Nearly all of the important structural damage occurred within the city and at the town of Carpenteria, 12 miles southeast.

Good records obtained

Mr. Ulrich reports that an excellent record was secured from the accelerograph installed in Santa Barbara. Rough preliminary measurement of the record indicates that the *double* amplitudes have measurements of about 35 mm. for the vertical components and about 110 mm. for the horizontal components. In general, the scale is about 25 mm. of *single* amplitude for 0.1 *g* acceleration. Preliminary estimates would seem to indicate accelerations of the order of 0.06 *g* for the vertical component and about 0.2 *g* for the horizontal component. The record indicated that the duration of the principal shock was very short—4 seconds.

Mr. Ulrich expressed the opinion that the short duration of the shock probably accounted for the comparatively low property damage. Some of the cracked walls noted would no doubt have collapsed under continued shock.

There was little damage to numerous one-story store buildings of Spanish architecture, with tile roofs. A great deal of plate glass was broken, however. Much of the wall cracking opened up old cracks originated during previous seismic disturbances, where these cracks had been patched over or inadequately repaired.

The most severely damaged building was probably the six-story Benjamin Franklin Building, which has a reinforced concrete frame with hollow tile and brick masonry filler walls and hollow tile interior partitions. This building was severely damaged in the 1925 quake,

Cracked masonry at entrance to Santa Barbara building, typical of damage to other structures that were repaired after the 1925 quake.

columns being fractured at the beams and the filler walls and partitions badly shattered. Damage by the 1941 quake is of similar character, though not as severe, the most noticeable damage being in the lower story, as shown in the accompanying illustration.

Several other buildings rebuilt after the 1925 quake suffered damage. Among them was the Carrillo Hotel, a five-story reinforced concrete frame with masonry panel walls, which was cracked in the first story, where the columns are high and large openings exist. Also, in a warehouse, three stories high and constructed in two sections, there are cracked masonry filler walls, fractured spirally reinforced concrete columns along the street elevation, and cracks through lightly reinforced concrete rear walls.

Newer buildings designed to be earthquake-resistant suffered no structural damage. Fallen chimneys were rare. Buckling of angle bracing occurred in an elevated water tank.

Except for long-distance telephone service, which was interrupted for a few hours, utility damage was confined to 17 water-main breaks. Gas was shut off following the shock, and electric service temporarily discontinued to avoid the possibility of fire.

No surface faulting occurred, although a small slide was reported to have deposited some detritus on a highway and railroad right-of-way.

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Code change urged for high yield-strength bars

A special committee of the Structural Engineers Society of New York, appointed to cooperate in an advisory capacity with the Concrete Reinforcing Steel Institute and the civil engineering department of Columbia University on an investigation comparing concrete beams reinforced with high yield strength bars of twin-twisted and of hot-rolled type, rendered its report to the parent society last week. Weighing all evidence from the investigation, the committee concludes that there is no basis for the "exclusive advantages and privileges accorded to the twin-twisted type of reinforcement under the present building code provisions of New York City". The committee, however, concludes that the tests warrant an increase in working stress for high yield strength tension reinforcement, and believes that the use of such reinforcement with properly supervised or controlled concrete will lead to efficient construction.

The committee also made a specific recommendation relative to changes in the city building code as follows: "In order to apply to actual practice the results of these tests, the committee further recommends the adoption of the revision of Sections C26-364.0, 365.0 and 366.0 proposed by the Local Laws, Introductory Nos. 517, 518 and 519, as modified at the hearing of June 12, 1941, and now pending before the Council of the City of New York". These proposed laws, it is pointed out, specify, for all high yield strength steels with a yield point in excess of 50,000 lb. per sq.in., a working stress of 40 percent of the yield point, with a maximum value of 24,000 lb. per sq.in. in tension. When used in compression, the proposed laws require special approval for any special form of reinforcement.

President approves $150,000,000 public works defense program for PWA

A special division will be set up by PWA under Public Works Commissioner, M. E. Gilmore to handle the new job.

The $150,000,000 program of defense public works—provision of community facilities in defense areas—was finally approved by the President last week and turned over for execution to the old Public Works Administration. The PWA, whose life was recently extended by Congress to June 30, 1942, is setting up a special division, headed directly by Public Works Commissioner M. E. Gilmore, to handle the new job. Eleven regional directors are being appointed, located at Boston, Philadelphia, Richmond, Jacksonville, Detroit, Chicago, Kansas City, Fort Worth, Denver, Los Angeles, and Seattle.

Although all projects under the program must be approved in Washington, it is intended to handle most negotiations with local communities and to oversee projects through the regional directors.

Under the community facilities bill, a wide range of projects may be undertaken, including not only construction of facilities but also provision of services such as school busses or pay of teachers. Financial arrangements may range from 100 percent federal payment to any ratio of loans and grants. Loans made under the program will bear 3 percent interest.

In choosing projects, Works Administrator Carmody said last week, first preference will be given to projects for which local communities have already put up part of the money. Apart from this consideration, projects involving health and water supply are seen as most urgent, and then schools.

No standards have yet been set to determine what share of the cost of any given project will be borne by the local communities. The underlying theory is that the localities will pay what they can afford without undue hardship and the federal government the remainder. However, there is some thought in FWA of a division on the basis that federal money cover the part of the cost strictly chargeable to defense. Thus, a temporary school building for children of defense workers might be entirely federal, but a permanent building could be put up if the local government would pay the difference in cost.

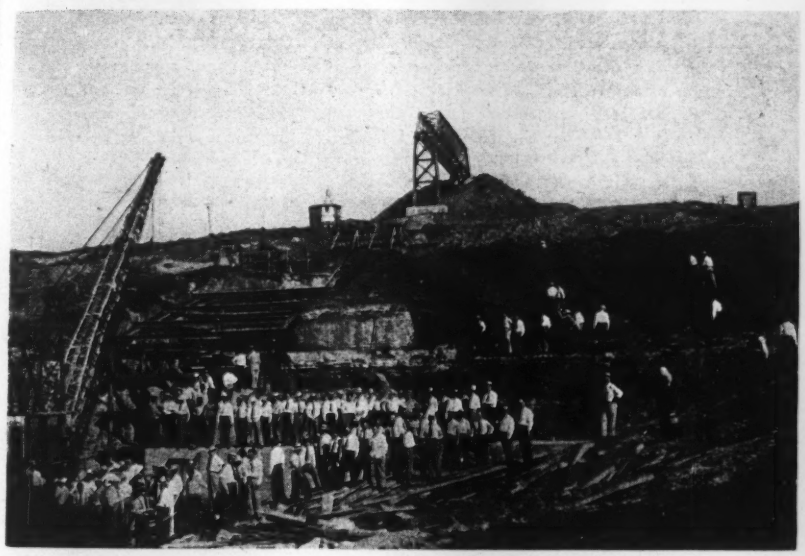

Photo by T. W. Oliver, Senior engineer, Bridge Design Department, Kansas highway commission.

Kansas engineers inspect Kanapolis Dam

Some 125 members and guests of the Kansas Engineering Society last month made an inspection trip to the Kanapolis Dam, located on the Smoky Hill River, 30 miles southeast of Salina, Kan. The trip was sponsored by the society with the Salina Engineering Club acting as host. E. W. Hopkins, city engineer of Salina, and L. W. Servis, of the Portland Cement Association, were in charge of arrangements for the visitors at the dam. A. G. Aldrich, engineer of plan surveys for the Kansas Highway Commission, and secretary-treasurer of the K. E. S., planned the tour.

At the time of the inspection the ½-mile diversion tunnel at the dam was completed except for the concrete bases for the large control tower at the inlet. Work was progressing on the huge earthfill dam which will be nearly two miles long, with additional one-quarter mile dikes at each end. When completed the structure will be almost 120 ft. high above river bed. With spillway at El. 1,507 ft. the dam will impound about 450,000 acre-ft. of water with a surface area of 15,000 acres. With an average water depth of about 40 ft. at the dam, it will back up an estimated 18 to 20 miles through the rough canyon country in the Smoky Hill River area. The project is being constructed by the U. S. Engineer Department.

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Toll superhighways are authorized for Chicago

Chicago and Cook County were authorized by the dying Illinois legislature in its last session on June 30 to build superhighways financed by tolls. The act sets up a five-man Highway Toll Authority, three members to be appointed by the governor, and one each by the city and county. Bonds for financing the highways may be issued by the Authority against anticipated toll revenues. Up to the final passage of the bill a limitation of $30,000,000 indebtedness and application of the toll principle to other counties and cities were considered, but these items were thrown out at the last moment. All through its consideration, the bill was embroiled in a political dissension whether the board would consist of one, three or five members.

Until the authority has been set up, fate of several superhighway projects now planned for the city by the Department of Subways and Superhighways and the Cook County Highway Department is undetermined. The city has already started land condemnation for its long-proposed Congress St. project to the west from the Loop. The county has three projects all planned.

A former financing plan, the issuance of bonds against the city and county share of the gas tax, was declared unconstitutional by state courts, leaving the toll method as practically the only one available at this time.

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Navy wants $585,000,000 more for construction

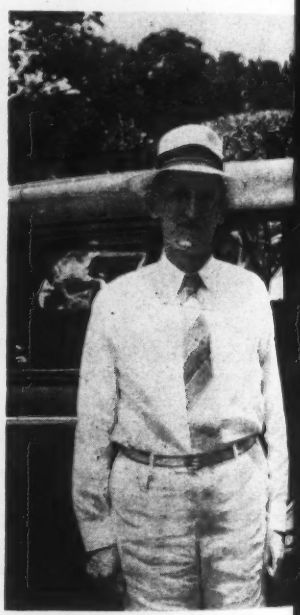
Funds now available for construction of productive facilities would be increased to about two and a half billion under a Navy request for an additional $585,000,000. Of this sum, $300,000,000 would be for construction of shipyards, $160,000,000 for ship-repair facilities, and the remainder would be available for ordnance facilities.

MEN at WORK

Key men on construction of the army cantonment at the Aberdeen Proving Ground in Maryland. Reading from left to right, they are: A. O. LEIGHTON of Irwin & Leighton, contractors for the work; LT. COL. GEORGE W. OUTLAND, commandant, Ordnance School; LT. COL. S. W. McILWAIN, former constructing quartermaster for the project and now zone constructing quartermaster at Boston, Mass.; MAJ. ROY C. GREGORY, constructing quartermaster; C. P. HOFFMAN, project engineer, C.Q.M.; FRANK ROLLER, project manager for Irwin & Leighton; and FRANCIS S. FRIEL of Albright & Friel, Inc., consulting engineers for the job.

Westinghouse officials (above) inspect their new $3,000,000 fluorescent lamp plant under construction at Fairmont, W. Va. They are, left to right: DAVID S. YOUNGHOLM, vice president; G. W. SCHUSLER, superintendent of construction work, and GEORGE PARKMAN, director of all Westinghouse building, construction, and maintenance.

Back from a flying trip to England to report to the U. S. Public Roads Administration on British roads under war conditions, LT. COL. LACEY V. MURROW (at right), Washington state director of highways, stops at Casper, Wyo., to speak to the Western Association of State Highway Officials.



Duties as both assistant construction engineer of the South Carolina highway department and executive secretary of the National Council of State Board's of Engineering Examiners keeps T. KEITH LEGARE (above) mighty busy these days.

Walter J. Douglas dies; New York consultant

Walter J. Douglas, member of the consulting engineering firm of Parsons, Klapp, Brinckerhoff & Douglas, New York, died in that city on July 2nd, 1941.

Walter J. Douglas was born in Baltimore, Maryland, on May 11, 1872, and graduated from Lehigh University as a civil engineer in 1894.

After four years spent in coal mine and railroad surveys, he joined the staff of the Engineer Commissioner, in the District of Columbia, as Assistant Engineer of Bridges. In 1901 he became Engineer of Bridges and served in that capacity until 1910. As such he was responsible for the design, among others, of the Connecticut Avenue, Rock Creek, and Anacostia Bridges in Washington. In 1908 he served as Consultant for Barclay Parsons & Klapp, Consulting Engineers, on the design of the Almandares Bridge, Havana, Cuba, and in 1910 left Washington to become associated with that firm. This association

WALTER J. DOUGLAS

continued until his death, except for the period from June 1918 to May 1919, when Mr. Douglas was Engineer of Maintenance at the Panama Canal. While at Panama Mr. Douglas was Acting Governor of the Canal Zone for some months. Returning from Panama, Mr. Douglas became a member of the firm headed by General William Barclay Parsons, which firm later became Parsons, Klapp, Brinckerhoff & Douglas. Mr. Douglas gave a large part of his time to the bridge and tunnel work of the firm. When the Arlington Memorial bridge was built at Washington, between 1925 and 1930, he acted as Consulting Engineer to the Commission. He took an active part in the design and construction of the Detroit-Windsor Vehicular Tunnel and the Scheldt River Tunnel at Antwerp, Belgium. He was Deputy Chief Engineer of the Cape Cod Canal Co. and also was in general charge of the firm's hydro-electric department, concentrating on the design and construction of dams, canals, and pipe lines. In recent years he acted as Consultant to the U. S. Engineers on numerous projects.

Mr. Douglas was the author of many articles in *Engineering News* and *Engineering Record*, and was Associate Editor of "Merriman's American Civil Engineers' Hand Book."

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Flood control may become post-war work

Further implementing his plans for creation of a post-war reservoir of public works, the President last week asked Congress to modify the pending flood control authorization bill to aim it more specifically at the post-emergency situation.

Debate on the bill when it passed the House and the report of the House Committee clearly expressed the intention that most of the projects authorized in the bill be deferred until after the war. In a letter to the Senate, which now has the bill before it, the President recommended that a definite provision be written into the bill, saying that none of the projects shall be undertaken during the national emergency unless the President finds that they are of value to defense.

The President, moreover, asked that authority be given the Chief of Engineers to undertake surveys in any basin that seems to him desirable. At present such surveys are limited to basins listed in the "308" reports of 1927, or specifically authorized in subsequent legislation. An appropriation of $10,000,000 for such surveys would be authorized.

This provision, together with the $10,000,000 authorized in the pending highway bill, would bring to $20,000,000 the sums now before Congress to finance immediate engineering work on post-war projects.

The President also asked that two flood control projects in the TVA area—at Chattanooga, Tenn., and Rossville, Ga.—be dropped from the authorization bill since they conflict with TVA jurisdiction.

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Sewage works meeting to feature stream pollution

For its importance and timeliness of technical discussions, the second annual convention of the Federation of Sewage Works Associations is expected to set a new high in sewage works meetings. The convention, to be held in New York City Oct. 9–11, will bring together hundreds of engineers, operators and educators from all sections of the country, to engage in discussions of national stream pollution questions and problems of treatment works operation. A program has been developed to include all phases of sewage and industrial waste treatment and will place particular stress on the control and operation of various types of sewage treatment processes.

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Rains reduce danger of TVA power shortage

Week-end rains in the Tennessee Valley Authority area are reported as coming in time to assure the TVA management that—with continued cooperation of the public in conserving power—there will be no interruption of defense production in plants using TVA power, according to General Manager Gordon R. Clapp in a statement issued July 5. However, Mr. Clapp reports that the present determination by citizens of the Tennessee Valley to conserve power must not be slackened, since water levels are still far below normal and defense needs are steadily increasing.

Furthermore it is considered fortunate that the gain in energy from the rains came just in time to offset the power loss due to the unexpected shutdown of TVA's Sheffield steam plant for emergency repairs. Final estimates of the effect of the rains cannot yet be made, since the flow in the Clinch and Tennessee Rivers will not reach its maximum for three or four days. Preliminary figures, however, indicate that the precipitation so far in July averaged about 4 in. over the Tennessee Valley above Chattanooga, Tenn., and is considered sufficient to fill the authority's main reservoirs within the next week. The rainfall is also expected to raise the level of Norris and Hiwassee Lakes at least 4 ft. and to add about 175,000,000 kw.-hr. of power to the TVA system.

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Tacoma Bridge contractors upheld by supreme court

Refusing to reverse a previous decision ruling that the Washington State Toll Bridge Authority had to pay interest on $619,000 due three contractors on the Tacoma Narrows suspension bridge, the Washington State Supreme Court last week again upheld the bridge contractors' claims.

The construction companies involved in the suit are: Pacific Bridge Co. of San Francisco, General Construction Co. of Seattle, and Columbia Construction Co. of Portland, Ore. The bridge authority had asked the court to modify its decision by holding it an agency of the state and thus exempt from paying interest on the $619,000 debt.

MEN AND JOBS

Henry J. Brunnier, San Francisco, Calif., consulting structural engineer, received the annual Marston gold medal award at the Iowa State College commencement June 8. Mr. Brunnier, a native of Iowa, received a bachelor's degree in civil engineering from the college in 1904 and a professional degree in 1911. After his graduation Mr. Brunnier worked for the American Bridge Co., Pittsburgh, New York Edison Co., New York, and the Ford-Bacon & Davis Engineering Co., New York. In 1908 he established an office in San Francisco to begin private practice as a consultant. Mr. Brunnier was one of five members of the consulting engineers' board for the San Francisco-Oakland Bay Bridge project. During the World War he cooperated in organizing and managing a department of the U. S. Emergency Fleet Corp. for construction of reinforced-concrete ships, and is now active in consulting engineering for naval construction work in the Panama Canal Zone and the San Francisco Bay region.

H. J. BRUNNIER

F. Herbert Snow of Harrisburg, Pa., has been named consulting engineer for the city of Harrisburg. Mr. Snow's appointment revises the city engineering department, with the position of city engineer vacated by the death of **E. Clark Cowden** in February, 1940, continuing to be unfilled. Since Mr. Cowden's death the engineering department has been conducted by **Joseph M. Peters,** assistant.

R. Walter Briggs, of Pewee Valley, Ky., has been appointed district supervisor of rural highways for the district of Jefferson, Spencer, Oldham and Bullitt counties. His headquarters will be in Louisville and he will work under the district highway commissioner.

David Clerck of Quebec City has been named president of the recently established Quebec Provincial Commission of Sewage.

F. E. Stepp has been appointed city engineer of Dalton, Ga., and assumed his new duties June 15. He has been resident engineer for the highway department of that state for several years with headquarters at Dalton.

A. B. Patterson, president of the New Orleans Public Service, Inc., has just become a dollar-a-year man for the government as defense contract service coordinator for the New Orleans zone. The appointment was made by the Director of Production Management and confirmed by President Roosevelt.

Lieut. George K. Ryan has been transferred from Camp Livingston, La., to Charlotte, N. C., where he is to be assistant construction quartermaster for the $3,000,000 quartermaster supply depot under construction for the U. S. Army.

Homer S. Tucker, who has been with the U. S. Engineer Office at Dallas, Tex., for the past five years, has been ordered to report to Washington in anticipation of service at the new U. S. airbase on the island of Jamaica.

Edward B. Wilkens, a native of New York, and a graduate of Columbia University, has been appointed planning engineer of Henrico County, Va. He will act as consultant with **Tazewell Ellett,** county engineer, in planning highway construction.

Lt. Col. Ludson D. Worsham, formerly district engineer in Pittsburgh, has taken over the Mobile office of the U. S. Engineer Corps. Col. Worsham is a resident of Memphis, Tenn. He replaces **Lt. Col. Willis E. Teale,** chief of the Mobile district since last November, who has been made commanding officer of the 38th Engineer Regiment at Fort Jackson, S. C.

William F. E. Cabiniss has been appointed senior engineer for PWA in Charleston, S. C. A native of North Augusta, S. C., Mr. Cabiniss has been with PWA since October, 1938. He graduated from Georgia Tech in 1928 and for several years he worked as a civil and mechanical engineer for the Phosphate Mining Co., Nichols, Fla. He replaces **Howard F. Peckworth,** who has gone to New York to become editor of *Civil Engineering.*

William P. Seaver of New York and **Lee F. Johnson** of Colorado have been appointed assistant administrators of USHA. Mr. Seaver, an architect and engineer, has been USHA assistant administrator in charge of management and for a number of years was an official of FHA; he will be in charge of project development for USHA. Mr. Johnson has been special assistant to the USHA administrator. He is a former member of the faculty of the University of Colorado and will be in charge of management of completed projects.

Alex H. Kessler, of Milwaukee, Wis., has been appointed city engineer of Ripon, Wis.

A. T. Petersen, Jr., has been named to the joint post of city clerk and city engineer of Livingston, Mont. and **Dick Dean** has been appointed assistant city engineer.

Fred H. Reichert, acting county engineer at San Antonio, Tex., and a reserve captain in the Corps of Engineers, has been called to military service at Fort Belvoir, Va.

M. L. Shadburn, former division engineer for the Georgia state highway department at Gainesville, has been named chief engineer of the highway department at Atlanta. The appointment follows the resignation of **W. R. Neel,** who accepted a position with Cooper & Cooper, architects, of Atlanta and is to have charge of engineering work on important national defense projects. Mr. Shadburn became associated with the department in 1919, working under Mr. Neel. He remained with the state agency until 1923. Upon coming back to the department in 1933, he served as assistant division engineer, division engineer and assistant director of the state division of highway planning, and on May 1 of this year became division engineer at Gainesville, where **C. B. Smith,** formerly of the Columbus division office, will replace him.

M. L. SHADBURN

Russell J. Carroll, of Jacksonville, Fla., formerly of Tampa, has been appointed by the U. S. Maritime Commission as chief engineer and construction superintendent for the erection of shipbuilding plants at Oakland and Richmond, Calif., and left June 13 for San Francisco, where he will establish headquarters.

J. Herbert Valentine, WPA supervisor for Nash and Edgecombe counties, N. C., has been appointed building inspector for the city of Rocky Mount, N. C., and assumed his new duties July 1.

Dewitt O'Dell has been reappointed county superintendent of highways of Oswego County, N. Y., for a four-year period beginning in September. Mr. O'Dell is now completing his first term in office.

Continental Divide Tunnel work ahead of schedule

More than three miles of the Continental Divide Tunnel have been driven through the granite backbone of the Rocky Mountains in Colorado since construction started a year ago, and it now seems possible to complete the tunnel in five, instead of the seven years originally anticipated, according to Commissioner John C. Page, U. S. Bureau of Reclamation.

The tunnel is being driven through the mountains directly underneath the Rocky Mountain National Park at an elevation of 8,300 ft. above sea level. The tunnel enters at Grand Lake and comes out 6 miles southwest of Estes Park, Colo., and is being driven from both ends simultaneously.

In the first year of operation 11,200 ft. have been driven from the east portal, and 6,100 ft. was driven from the west portal during the past nine months. To date 77,000 cu.yd. of rock have been excavated and 1,150,000 lb. of structural steel tunnel supports installed. Of the total tunnel driven to date, 65 percent is unsupported at the east end and 45 percent at the west end. Supports have not been necessary in these sections due to the hardness of the solid pre-Cambrian rock.

Two contracts have been awarded to S. S. Magoffin Co. Inc., of Englewood, Colo., for constructing the tunnel from the east end; the first contract for driving 8,000 ft. was completed 114 days ahead of schedule, and at the present rate of progress the second contract should be completed 200 days ahead of the contract time.

The first contract on the west end, which was awarded to Platt Rogers, Inc. of Pueblo, Colo., for excavating 6,600 ft. of the tunnel, is nearing completion. Bids were opened for excavating an additional 8,000 ft. and concrete invert for 14,200 ft. on the west end of the tunnel on June 5. The low bid for this section was submitted by Stiers Bros. Construction Co., St. Louis, Mo. at $832,906.

The project is being constructed by the U. S. Bureau of Reclamation, Denver, Colo., as a part of the Colorado-Big Thompson project.

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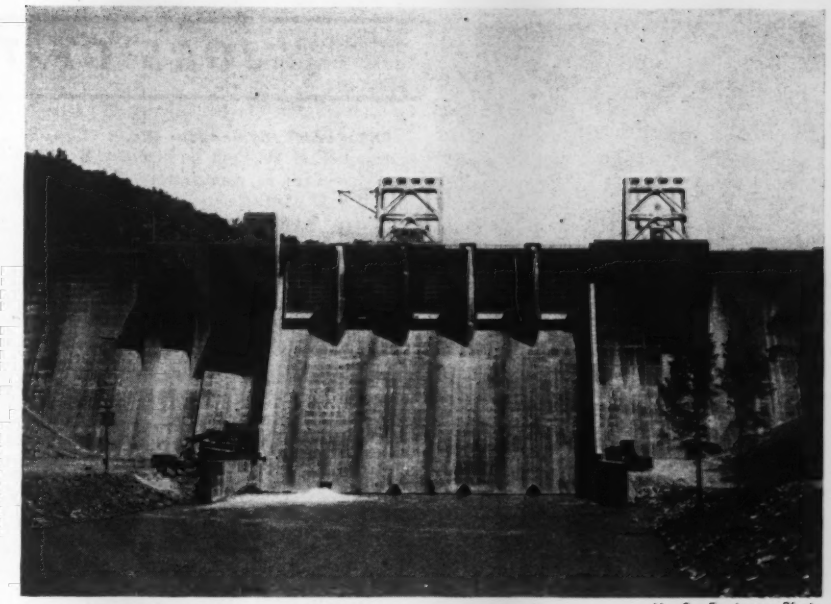
Pipeline from Maine to Canada soon to be laid

Construction of a 236-mi. crude oil pipe line from Portland, Maine, to Montreal, Canada, will soon be started, according to B. F. Meglaughlin, an official of the Montreal Pipe Line Company, Ltd. Initial operations will begin at Gorham, N. H., and construction will proceed east and west from this point.

The Montreal Pipe Line Co. Ltd. (subsidiary of the Standard Oil Co. of New Jersey) will build the Canadian section, while Portland Pipe Line Co. (another Standard Oil Co. subsidiary) will build the American section.

Starting from South Portland, Maine, the line will cross Maine and enter New Hampshire near Gorham, from where it will pass through the White Mountains to Vermont, cross the upper corner of Vermont to North Troy, and then across Quebec to the St. Lawrence River at Montreal. The line will be carried under the St. Lawrence River into Montreal.

When completed the line will carry about 50,000 barrels of crude oil per day into the refineries of Montreal. Cost of construction is estimated at $8,000,000.



U. S. Engineer Photo

Mahoning Dam completed a year ahead of schedule

Accepted June 2 from the general contractor, the Dravo Corp., Pittsburgh, as complete, Mahoning Creek Dam is available over a year ahead of schedule for controlling floods on Mahoning Creek in northeastern Armstrong County, Pa. Latest approved cost estimate for the completed project is $6,500,000. Located about 22 miles above the junction of Mahoning Creek with the Allegheny River and about 50 miles northeast of Pittsburgh, the dam is expected to aid in reducing flood heights at the city. The structure will provide permanent storage for 3,700 acre-ft. and 75,300 acre-ft. for controlling floods from a 341-sq-mi. drainage area. When the reservoir is full a 2,275-acre lake extending about 19½ miles upstream will be created.

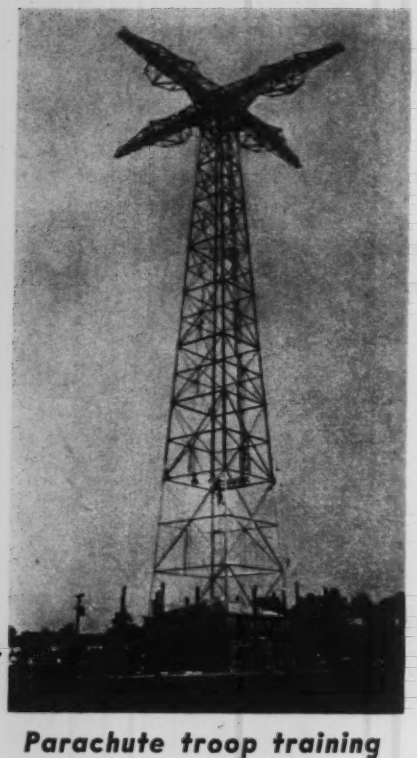
Maximum flood at the site occurred March 18, 1936, with a peak discharge of about 22,800 cfs. With the structure just completed flood waters normally will be released by means of three gate-controlled sluices, the outlets of which are shown at the water line. An additional outlet controlled by a needle valve is also available for low water discharge regulation or with the summer pool. This valve is shown releasing water to the left of the three sluices. The five vertical-lift crest gates are to be operated by two traveling gantry cranes, one of which will serve as a spare. When in a raised position the gates clear the dam crest by 23 ft.

The dam has a total top length of 993 ft. and a maximum height above stream bed of 160 ft.

The project was carried out by Pittsburgh District, U. S. Engineers. The dam was designed under the general direction of Charles N. Wellons, principal engineer, under the immediate supervision of William E. Sidney, senior engineer and head of the design section. J. I. Bowman served as resident engineer for the U. S. Engineers, and D. P. Childress was project engineer for the general contractor. Lt. Col. D. Lee Hooper is now district engineer of the Pittsburgh U. S. Engineer District.

Contractors on defense work liable for sales tax

Judge Walter B. Jones, of the Alabama circuit court, sitting at Montgomery, last week held that contractors were liable for payment of the state's 2 percent sales and use taxes on materials purchased for use in the construction of army buildings on cost plus-fixed-fee basis. The decision was made in the case of King and Boozer, Anniston, Ala. lumber firm, for sales taxes totaling $1,236 plus penalties and interest, on materials sold to the Dunn Construction Co. and John S. Hodgson & Co. for use in construction of buildings at Fort McClellan.



Parachute troop training towers at Fort Benning

For initial training of parachutists for the U. S. Army, two types of towers are used, free jump (above) and captive jump; the only difference being the use of descending guide cables for the captive tower, whereas the parachutist descending from the free jump tower floats down without fixed control. The parachutist is lifted by cable, and the parachute is tripped by an automatic releasing device as it comes in contact with the cross arm at the top.

Two towers 250 ft. high, of riveted steel construction, each supported on four concrete spread footings, were constructed at Fort Benning, Ga. in three weeks by M. R. Thomason, contractor, of Montgomery, Ala. The cross arms at the top of the towers are 127 ft. from tip to tip, having walkways with steel grating and hand rails through the arms. Each tower required 57 tons of steel for construction, which was fabricated by the Bethlehem Steel Corp. These are the first and only towers of this type and size now in use. However, two similar towers of about one-half the height were used in the amusement area at the recent New York World's Fair.

Georgia starts $5,300,000 road construction program

Federal-aid highway construction totaling $5,300,000 has been placed under project agreements by the Georgia State Highway Board, and contracts amounting to $1,000,000 will be let within the next month, according to W. E. Wilburn, chairman of the highway board.

JOBS OF THE WEEK

TNT PLANT, Sylacauga, Ala.

E. I. du Pont de Nemours & Co., Wilmington, Del., will construct and operate a plant to manufacture TNT, DNT, and tetryl for War Department, Washington, D. C. Estimated cost $24,675,000. The project will be known as the Coosa River Ordnance Works.

AMMUNITION STORAGE DEPOT, Milan, Tenn.

H. K. Ferguson Co., Cleveland, O., and Oman Construction Co., Nashville, Tenn., will design and construct ammunition storage depot, magazines, shelters, buildings and utilities at Wolf Creek Ordnance Plant, and Milan Storage Depot for War Department, Washington, D. C., $10,791,950. Procter & Gamble will operate.

ARMS AMMUNITION PLANT, St. Louis, Mo.

Fruco Construction Co., St. Louis, Mo., Fruin-Colnon Contracting Co., St. Louis, Mo., and Massman Construction Co., Kansas City, Mo., have been awarded a joint contract for the additional buildings and facilities for a small-arms ammunition plant at Goodfellow and Bircher Blvds. Construction is estimated to cost $33,999,559 and machinery and equipment $25,200,040. U. S. Cartridge, Baltimore, Md., a subsidiary of Western Cartridge Co., Alton, Ill., will operate the plant. Giffels & Vallet, Inc., Detroit, Mich., A. J. Brandt, Inc., Detroit, Mich., and Mauran, Russell, Crowell & Mullgardt, St. Louis, Mo., are architects and engineers for the work, which is being done by the U. S. War Department, Washington, D. C.

AMMUNITION STORAGE DEPOT, Texarkana, Tex.

Brown & Root, Inc., Houston, Tex., will construct ammunition storage depot, including roads, magazines, loading platforms, shelters, railroads, etc. for War Department, Washington, D. C., $9,411,827. Gieb, LaRoche, Dahl and Chappel, Dallas, are engineers and architects.

TNT and DNT Plant, Sandusky, O.

E. B. Badger & Sons, Inc., Boston, Mass., has been awarded contract for constructing TNT and DNT plant at Plum Brook Ordnance Plant, including engineering and architectural services, for War Department, Washington, D. C., $9,252,911. Trojan Powder Co., Allentown, Pa., will operate.

FACTORY, North Hempstead, N. Y.

Stone & Webster Engineering Corp., New York, N. Y., has been awarded contract for 1 story factory and 3 story administration building to have 1,350,000 sq. ft. floor space by Sperry Gyroscope Co., Inc., Brooklyn, N. Y. The Defense Plant Corp. will finance. Land and buildings will cost $9,983,353; equipment $10,297,648.

PICRIC ACID PLANT, Marche, Ark.

Lummus Co., New York, will design and construct picric acid plant for Maumelle Ordnance Works for War Department, Washington, D. C. Cost is $8,000,000.

SIGNAL CORPS BUILDINGS, Conley, Ga.

Constructing Quartermaster, Atlanta, Ga., awarded contracts to A. Farnell Blair, Decatur, Ga., for constructing ten additional warehouses 180x620 ft. at $2,500,000; four sheds $500,000, special sheds for U. S. Engineers, $210,000; Central Contracting Co., Atlanta, Ga., $4,000,000; administration building awarded to A. K. Adams Co., Atlanta, Ga., $672,000; and Beers Construction Co., received contract for miscellaneous buildings at $373,000. The total cost is $8,225,000.

GENERATNG PLANT, Port Washington, Wis.

Dahlman Construction Co., Milwaukee, Wis., will build superstructure of electric generating plant for Wisconsin Electric Co., Milwaukee. Total estimated cost $7,100,000. Concrete chimney was awarded to Heine Chimney & Construction Co., Chicago, Ill. Plumbing to F. C. Kuetemeyer, Milwaukee, F. Luber, c/o owner, is engineer.

ORDNANCE PLANT, Burlington, Ia.

Al Johnson Construction Co., Minneapolis, Minn., and A. Guthrie & Co., St. Paul, will construct addition to ordnance plant for War Department, Washington, D. C. Estimated cost $7,200,000. Day & Zimmerman, Inc., Philadelphia, Pa., will operate.

TITANIUM PLANT, Tahawus, N. Y.

Wigton-Abbott Corp., Plainfield, N. J., will contruct titanium plant, including housing facilities, sewers, water lines, for Titanium Pigment Corp., New York, N. Y. Estimated cost $6,000,000. A. E. Wheeler, New York, N. Y., is engineer.

ORDNANCE STORAGE DEPOT, Benicia, Calif.

Eaton & Smith and H. P. Moran, San Francisco, Calif., will build ordnance storage depot including igloo magazines, asphaltic roads, railroad, loading platform, draining ditch, bridges, railroad underpass, underground railroad, improving igloo magazines, underground storage, magazines and warehouses, for War Department, Washington, $3,099,779. Clyde C. Kennedy, San Francisco, architect and engineer.

NOTE—Additional bidding and contract news on over 800 projects large and small appear in the Construction News section beginning on page 15.

Defense training keynote of annual S.P.E.E. meeting

(*Continued from page* 3)

the discussions was "The Place and Teaching of Science and Technology in the Engineering Curricula."

Speaking on this subject, President D. B. Prentice of Rose Polytechnic Institute, said that almost the only certainty was change and cited items to show changes in the basic sciences. He insisted that the new ideas should be taught by new methods and raised pertinent questions about teaching mathematics, physics, drawing and chemistry. Said President Prentice, "Routine experiments should be omitted and something done to stretch the student's mind."

At the session devoted to discussion on basic subjects, a paper on mathematics by Prof. E. R. Hedrick, University of California, was of unusual interest. He cited data to show that high school teaching of mathematics was often at a low level and advocated that engineers use their influence to remedy the situation in their own communities. Mr. James E. Parker, chief engineer, Detroit Edison Co., presented "A Layman's Views" of education and discussed the fact that in many schools more than a quarter of the curriculum was being devoted to social and humanistic studies, whereas the place for these studies should be in the home and in the high school.

The conferences of the civil engineering division, held for one day, were devoted to a symposium on teaching more subjects relating to structures, sanitation, soil mechanics, construction and applied hydraulics. The paper on "Teaching Methods in Structural Engineering" by Prof. Frank Kerekes, of Iowa State College, received an unusual amount of applause and commendation. In the conferences devoted specifically to structures and construction methods it was generally conceded that the inclusion of more curricular material on building construction and on the planning of construction operations was of vital importance, especially at this time.

At an impressive ceremony Anson Marston, dean emeritus of the engineering division, Iowa State College, was presented with the Lamme Award, which is given annually by the Society. The citation read in part, "for his leadership and service in the profession of engineering; for his vision and initative in broadening engineering curricula; for his enterprise in guiding his students to a balance of engineering skill and artistic conception; for his foresight as a pioneer in the field of engineering extension; and for his untiring efforts in promoting closer cooperation between government and engineering colleges." Dean Marston has been on the Iowa State College staff for 15 years. In 1929 he served as president of the American Association of Land Grant Colleges and Universities and of the American Society of Civil Engineers.

Officers elected for 1942 were: President, Prof. A. H. White, University of Michigan; vice-presidents, President H. T. Heald, Illinois Institute of Technology, and Prof. F. L. Eidmann, Columbia University; treasurer, W. O. Wiley, Wiley & Sons, New York; secretary, F. L. Bishop, University of Pittsburgh. Council members elected for three years were: J. H. Belnap, Westinghouse Co.; Dean A. C. Callen, Lehigh University; Dean F. M. Dawson, Iowa State University; Prof. N. W. Dougherty, University of Tennessee; Prof. S. Fairman, Purdue University; Prof. R. P. Hoelscher, University of Illinois; Dean C. J. Freund, University of Detroit.

The annual meeting in 1942 will be held in New York City, and the 1943 meeting will be held in Chicago, the latter date being the 50th anniversary of the organiation of the society in Chicago.

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FWA speeds construction of prefabricated houses

Construction has just been started on the second unit at Avion Village, FWA's first prefabricated defense housing project for workers of the North American Aviation Co, near Dallas, Tex. The first unit of the original project is now 85 percent complete. Each of these developments will contain 300 housing units, and their aggregate cost will be approximately $2,000,000. Contract for the second unit has been awarded to the Central Construction Company of Dallas, and engineers are now preparing the general layout for sewer lines and other public facilities for the new addition. The contract calls for completion of the project within 120 days.

As work begins on the second unit at Avion Village, Audubon Village, near Camden, N. J., the second and largest of FWA's prefabricated defense housing projects, is ready for dedication.

Working on a schedule which resulted in the field erection of 20 houses a day, FWA has rushed to completion the 500 family Audubon Village project. The 4th of July week-end found the "village" populated with about 200 families and ready to receive the balance as fast as they could be moved in—all this in less than three months since erection began.

Prefabrication and a new idea in financing home ownership are the novel features of Audubon Village (shown on this week's cover), which is one of three housing projects to be built according to the "Camden Plan." (See *ENR* May 22, 1941, p. 813). A special division of the FWA, headed by Col. Lawrence Westbrook, is sponsoring these projects. Introducing a new form of financing large-scale housing, the "Camden Plan" provides for the sale of housing facilities under a rental system to people who become stockholders in a "mutual housing corporation."

Another "village" for defense workers under the same plan was started last week in Linden, N. J. Three days after the contractor, the Clifford J. MacEvoy Construction Co. of Newark, N. J., got started, more than 200 foundations were excavated on the 700-family development. When the Linden project was first being considered, prefabricated method of construction was to be used. It is now understood that the prefabricated idea has been discarded. While no definite reason for the change has been announced it is probable that labor conditions influenced the decision.

Photo by Earl W. Reinhold

Audubon Village, near Camden, N. J., complete and ready for dedication.

OBITUARY

R. W. CLARK, 80, pioneer highway engineer of South Dakota, died late last month at Huron. He was a former member of the South Dakota highway commission.

LOUIS TODHUNTER FOSSUM, civil engineer, died June 20 at the Quonset Point naval air base, Whitford, R. I. Mr. Fossum was 56 and a resident of Orange, N. J.

OTTO V. KRUSE, general sales manager of the Baldwin Locomotive Works, died July 1 at St. Davids, Pa. Mr. Kruse was 54, and was a civil engineering graduate of Cornell University in the class of 1909.

D. ARNOLD LANE, chief underground engineer of the department of water and power of the city of Los Angeles, Cal., died July 1. He was secretary of the Los Angeles section of the American Society of Civil Engineers.

W. R. BURNETT, 82, former superintendent of roads in Haywood County, N. C., died July 1 at Waynesville, N. C.

THOMAS W. PHILLIPS, 52, Licking County, Ohio, engineer, died June 28 at Newark, Ohio.

C. J. DA SILVA, died June 22 at Atlanta, Ga. Mr. da Silva was a graduate of the Armour Institute of Technology, and had been associated with the U. S. Public Roads Administration in Atlanta for the past 10 years.

GLENN C. CULPEPPER, 49, assistant construction superintendent for the WPA, died June 13 at Birmingham, Ala.

THOMAS CUMMINGS, 76, building contractor, died June 24 at Stapleton, N. Y. Mr. Cummings was a resident of Staten Island, N. Y.

ARTHUR L. STEVENS, 69, sewer contractor, died June 23 at Cleveland, Ohio. Mr. Stevens was in charge of sewer construction for Cleveland from 1914 to 1922.

WILLIAM J. FITZGERALD, building contractor, died June 24 at Beloit, Wis.

GUSTAVE HEESCH, 72, founder and president of the firm bearing his name, died June 26 at Mason, Wis.

J. CHARLES WILSON, 83, last of the three members of the committee which drafted the present building code of Pittsburgh, Pa., died July 6 at Pittsburgh. Until last year Mr. Wilson had been president of the A. & S. Wilson Construction Co. for 35 years.

FELIX SELIGMAN, 52, manager of the water, gas and sewage disposal department at Duluth, Minn., died recently. He was a director of the American Water Works Association, the American Gas Association, and the Duluth Engineers Club.

FRANK P. ADAMS, city engineer of Brantford, Ont., and secretary of the Grand River Conservation Commission, died at Brantford on June 26. Mr. Adams had held his city engineer position for 21 years.

JOHN STEWART WALKER, 68, construction engineer, died July 1 at Richmond, Va.

ROY L. SMITH, superintendent of construction for the Koppers Co., engineering and construction division, died June 22. Mr. Smith was a resident of Mt. Lebanon, Pittsburgh, Pa.

CONTRACTS AND CAPITAL

ENGINEERING CONSTRUCTION awards for the week total $298,718,000. This is 25 percent higher than the previous record of $239,000,000 established Oct. 17, 1940. It is 205 percent higher than the corresponding week of 1940 which was a "high" week at $98,000,000 due to the first defense construction program.

The full significance of this record week is that it follows June the highest month on record when engineering construction averaged $147,000,000 per week, also the highest 6 months on record, $2,841,403,000 an increase of 9 percent over the previous record made by the second half of 1940.

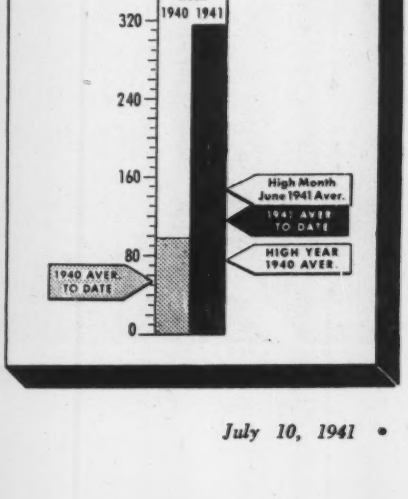
To this July 10 record week public work contributes $271,075,000, private $27,643,000. Of the public construction, $28,707,000 is state and municipal and $242,368,000 federal. Public construction is 321 percent higher than last year, private construction is 19 percent lower. Federal construction is 740 percent higher.

The cumulative total for the year to date, 28 weeks is a new record, too, $3,214,330,000. This is higher than the 52 weeks totals for every year except 1927, 1928, 1929 and 1940. It is a gain of 112 percent over the first half of 1940.

The classes of construction responsible for this new record are public buildings, $174,000,000, unclassified, $72,000,000 with gains also in industrial buildings, commercial buildings, waterworks, sewerage, streets and roads.

New capital for construction totals $1,090,458,000 of which $4,406,000 is from state and municipal bond sales and $1,086,052,000 is federal for both defense and civil work.

Cumulative new capital for the year to date is $4,917,760,000 compared with $844,762,000 a year ago, an increase of 483 percent. This 28-week volume of $4,917,760,000 is 26 percent higher than the entire 52 weeks of 1940, heretofore the highest year on record.



CONTRACTS

(Thousands of dollars)

	Week Ending July 11 1940	July 3 1941	July 10 1941
Federal	$28,822	$45,357	$242,368
State & Municipal	35,205	17,465	28,707
Total Public	$64,027	$62,822	$271,075
Total private	34,012	11,387	27,643
TOTALS	$98,039	$74,209	$298,718
Cumulative 1941 (28 weeks)			$3,214,330
1940 (28 weeks)			$1,519,274

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1940 28 weeks	1941 28 weeks
NON-FEDERAL	$837,762	$790,371
Corp. Securities	92,225	277,590
State & Mun.	467,348	283,008
U.S.H.A. loans	87,204	30,399
R.F.C. loans	6,985	35,874
R.E.A. loans	.....	500
Federal Aid—Hwy.	184,000	163,000
FEDERAL	$7,000	$4,127,389
TOTAL CAPITAL	$844,762	$4,917,760

FHA MORTGAGES

	Week Ending July 5 1940	June 28 1941	July 5 1941
Selected for appraisal	$22,177	$29,916	$25,000*
Cumulative 1941 (27 weeks)			781,722*
1940 (27 weeks)			657,927

* Subject to revision.

ENR INDEX NUMBERS

Index Base=100		1913	1926
Construction Cost	July '41	258.18	124.11
Building Cost	July '41	210.22	113.64
Volume	June '41	492	216

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Latin America
Bridges, Grade Cross'gs	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: All low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

WATER SUPPLY

PROPOSED WORK

Calif., Oakland—East Bay Municipal Utility Dist., 512-16 St., 900 lin. ft. 20 in. c.i. main, Grand Ave. (LS 268).

Ill., Lincoln—Central Illinois Electric & Gas Co., Lincoln, imprv. water sys., sinking well, $15,000. J. J. Woltmann, Bloomington, engr.

Ind., Plymouth — Imprv. WW and exten. water lines throughout city. $72,000 or more with equip.

Ia., Agency—H. L. Creamer, city clk., WW sys. $30,000. R. W. Gearhart, 349 21 St. S.E., Cedar Rapids, engr. CD 3/19—ENR 3/27.

†Ia., Burlington—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., water supply sys., Burlington shell loading plant. $435,000.

Ia., Corning—V. J. Mack, city clk., dam and reservoir to increase water supply. $40,000.

★**Kan., Kansas City**—Shawnee Twp., water supply lines, facilities. $500,000.

★**Kan., Olathe**—Mission Twp., 5822 Reeds Rd., water supply to Mission and Shawnee Twps. $1,000,000.

Ky., Lexington—Lexington Water Co., 167 N. Upper St., transmission main and installing 4 pumps. $93,000.

†Mass., Fort Warren—Con. Q.M., First Army Corps Army Base, Boston, rejected bids June 27, submarine water line. Will readvertise. CD 7/2.

Mo., Columbia—Water storage tank. Municipal Water and Light Plant. Over $25,000. Burns & McDonnell, 107 W. Linwood Blvd., Kansas City, engrs.

N. C., Greensboro—Proximity Mfg. Co., H. Cone, pres., surveys raw water supply. G. C. White, Durham, consult. engr.

Okla., Oklahoma City—R. A. Hefner, mayor, watermains, pump. station. V. V. Long & Co., Colcord Bldg., Oklahoma City, engrs. P. J. Porter, consult. engr. CD 2/26—ENR 2/29.

Pa., Erie—Bureau Water, 701 French St., exten. c.i. watermains Peach St. exten. Washington Ave., Gore Rd., etc. $20,000. J. Dunwoody, c/o owner, supt.

Tenn., Chattanooga — Hixon Utility Dist., c/o B. C. Roper, Chattanooga, water sys. $100,000. Betts Eng. Co., James Bldg., engr.

Tex., Edinburg — Water and sewer lines. $40,000.

†Tex., Midland—U. S. Eng., Santa Fe Bldg., Galveston, 200,000 gal. steel water tank and tower. $40,000 or more.

Tex., Morton—H. P. Wood, mayor, bids soon WW imprvs., new wells, pumps. $15,000. H. N. Roberts, 2420-20 St., Lubbock, engr.

Tex., Palacios—Voted bonds WW impvt. and exten. $75,000. J. Montgomery, c/o Littlefield Bldg., Austin, engr. CD 7/1.

Wash., Everett — Pinehurst Water Dist., $75,000 bond election July 26, rehabilitation water supply sys.

BIDS ASKED

Bids Asked July 14

Md., Towson—Comrs. Baltimore Co., Court House, Towson, 13,205 lin. ft. 6 and 8 in. c.i. watermains, fire hydrants, etc., Lodge Forrest.

Bids Asked July 15

N. Y., New York—Comr. Water Supply, Gas & Electricity, Municipal Bldg., steel and c.i. watermains, appurtenances, Cooper, Metropolitan and 82 Aves., Kessell, 69 and 132 Sts., Yellowstone Blvd., Union Turnpike, Utopia Parkway, Park Dr. and in Park Lane, Queens Boro.

Bids Asked July 18

†Arkansas—U. S. Eng., Gay Bldg., Little Rock, clearing permanent pool area, Nimrod Dam, Inv. 777-41-105.

LOW BIDDERS

†Ariz., Mesa—U. S. Eng., 751 S. Figueroa St., Los Angeles, June 27, elevated steel water tank, from Darby Products Steel Plate Corp., 1 and Walker Sts., Kansas City, Kan. **$59,434.**

†Calif., Campo—Con. Q. M., June 27, steel water storage tank, sewage treatment and disposal plant, incinerator, grading roads, etc., from Contracting Engineers Co., 2310½ W. Vernon Ave., Los Angeles. **$155,000.** CD 6/25.

†Calif., Victorville — U. S. Eng., 751 S. Figueroa St., Los Angeles, June 27, elevated steel water tank, from Pittsburgh-Des Moines Steel Co., 740 S. Bway., Los Angeles. **$68,650.**

Ill., Chicago—City, June 26, steel superstructure and iron South Dist. water filtration plant, from Strobel Constr. Co., 53 W. Jackson St. **$383,875.**

†Mass., Falmouth — Con. Q.M., Camp Edwards, June 26, water, sewer and electric utilities, from Ahlborg & Son, 97 Friendly Rd., Cranston, R. I. **$17,800.** CD 6/24.

†Mass., Falmouth—Con. Q.M., Camp Edwards, June 27, water supply sys., sanitary and storm sewers, 2nd, 3rd and 4th Echlon, from O. Ahlborg, 97 Friendly Rd., Cranston, R. I., **$44,500.**

Mo., Kansas City—City, July 1, chemical building in connection with water softening plant, North Kansas City, from S. Patti Constr. Co., 1114 Bway. **$250,000.** Est. $125,000. CD 6/5—ENR 6/12.

Mo., Kansas City—City, July 1, basin addns. to WW plant, North Kansas City, from Carrothers & Crouch, 7449 Bway., Kansas City, Mo. $414,000. CD 6/5—ENR 6/12.

Mont., Choteau—Farmers Co-operative Canal Co., G. E. Monkmann, secy., June 16, reservoir, from J. W. Merz, Inc., Helena, **$20,882.**

N. J., Hawthorne—Excavating, imprv. water distr. lines, 6 and 10 in. c.i. watermains, northwest section. **WPA. $38,427.** J. F. Sheehan, foot of 5 Ave. Paterson, WPA and owner's engr.

†N. Y., Fort Hamilton—Con. Q.M., June 26, water, gas and sewer lines, from Spinello Constr. Co., 437 Riverside Dr., Newark, N. J. **$97,960.**

N. C., Shelby—H. S. Woodson, mayor, June 25, water line exten., from Reed & Abee, Inc., Asheville. **$15,758.**

†Ore., Astoria—Con. Q.M., Fort Lewis, Wash., June 27, water purification, storage and pump. facilities and extens. and alterations to water sys., from Superior Cons'r. Co., 3281 36 Ave. S.W., Seattle, Wash., **$66,333.** CD 6/18.

†Tex., Harlingen—U. S. Eng., Sante Fe Bldg., Galveston, 200,000 gal. steel tank and tower, from Chicago Bridge & Steel Co., 2919 Main St., Houston. **$52,800.** Est. $60,000.

Tex., Highland Park (mail Dallas)—E. B. Germany mayor, imprv. WW distr., pumphouse, elevated tank, tower, etc. **WPA. $141,700.** R. Thomas, city engr.

Tex., Jasper—M. P. Hancock, mayor, WW sys., mains, valves, fittings, pumps and wellhouse. **WPA. $36,000.**

†Tex., Midland—U. S. Eng., Santa Fe Ry. Bldg., Galveston, steel water tank and tower, from Pittsburgh-Des Moines Steel Co., 1015 Tuttle St., Des Moines, Ia., **$54,650.**

†Tex., Mission—U. S. Eng., San Fe Bldg., Galveston, steel water tower and tank, from Chicago Bridge & Steel Co., 2919 Main St., Houston. **$53,800.** Est. $60,000.

Tex., Rhome—Imprv. WW distr. **WPA. $30,000.** Freese & Nichols Capps Bldg., Fort Worth, engrs.

Utah, Deweyville — Water sys. **WPA. $54,796.** Caldwell & Richards. Templeton Bldg., Salt Lake City, engrs.

†Utah, Ogden—Con. Q. M., 751 S. Figueroa St., Los Angeles, Calif., June 27, Pump. Plant 1, Hill Field, from Jas. J. Burke & Co., Kearns Bldg., Salt Lake City. **$28,174.**

†Wash., Fort Lewis—Con. Q.M., June 27, 2 rein.-con. reservoirs, from Standard Constr. Co., Perkins Bldg., Tacoma. **$35,349.** CD 4/22—ENR 4/24.

Wash., Seattle—Bd. P. Wks., June 26, watermains in Avalon Way and adjacent streets, from Argentieri & Colarossi, 7 Ave. W. and W. Howe St. **$66,950.** Est. $73,011. CD 6/18.

CONTRACTS AWARDED

†Ga., Conley—Con. Q. M., 101 Marietta St. Bldg., Atlanta, water distr., storm sewers, gas mains, gas distr. for heating purposes, to Espy Constr. Co., 108 E. Bay St., Savannah. **$113,892.**

Ill., Brownstown—WW and sewage disposal sys. **WPA. $125,000.**

†Ill., Scott Field (Belleville)—U. S. Eng., 816 U. S. Courthouse and Customhouse, St. Louis, Mo., 3 m.g. steel water reservoir, to Chicago Bridge & Iron Co., 332 South Michigan Ave., Chicago. **$52,510.** CD 624—ENR 6/26, under LB.

Ky., Eddyville—Commonwealth of Kentucky, Eng. and Constr. Div., R. C. Wyatt, ch. engr., elevated water tank, filtration and pump. plant, Eddyville State Prison, to Ruby Lumber Co., Madisonville, **$69,805.** H. K. Bell, 555 S. Lime St., Lexington, engr. CD 6/4—ENR 6/12.

†N. J., Clark—Federal Works Agency, 7 and D Sts., Wash., D. C., watermains for defense housing project. **WPA. $33,000.** J. H. Weitzen, Smith and Hobart Sts., Perth Amboy, WPA and owner's engr.

N. M., Farmington—Lon Woods, mayor, water sys. imprvs. **WPA. $30,000.**

Pa., Bethlehem—City Council, A. Wear, councilman in charge, c.i. watermain, Kelchner Rd. area, own forces. **$15,800.** F. L. Fox, city engr. CD 6/23—ENR 6/26.

†S. C., Sumter—U. S. Eng., 29 Custom House, Charleston, drilling wells to produce 1,000 gal. water per min., Sumter Co., to Atlantic Well Co., Norfolk, Va., **$30,000.** Awarded 6/27.

Que., Quebec—Supplying 48 in. rein.-con. pipe for St. Charles River submarine watermain, to Pressure Pipe Co. of Canada, Ltd., Sun Life Bldg., Montreal, **$92,850;** valves, accessories, to Francis Hankin & Co. Ltd., 2028 Union Ave., Montreal, **$47,030.** CD 5/7—ENR 5/15.

Que., St. Johns—Dpt. National Defense for Air, Ottawa, Ont., laying about 6,000 ft. water piping from city mains to airport, to W. H. Kelly, Hawkesbury, Ont., about **$25,000.** CD 10/30—ENR 11/7.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Idaho, Pocatello—Sewage disposal plant. $82,000. R. Hamilton, city engr. CD 6/3—ENR 6/5.

Ia., Belle Plaine—E. E. Eyler, city clk., sewer and WW extens. $25,000. R. W. Gearhart, 349 21 St. S.E., Cedar Rapids, engr.

†Ia., Burlington—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., sewage disposal sys., Burlington shell loading plant. $435,000.

Kan., Mission—Mission Twp., sanitary sewers. $200,000. Shockley Eng. Co., Graphic Arts Bldg., Kansas City, Mo., engr.

SEWERS, etc. (Proposed Work. Cont'd.)

Mass., Marlboro—J. A. Bigelow, in charge, city engr., City Hall, vitr. clay sewer line, Union and Bolton Sts. Over $25,000.

†N. J., Clark—Federal Works Agency 7 and D Sts. S.W., Wash., D. C., sheating, c.i. and vitr. tile outfall sewer for housing. $66,323. WPA. J. H. Weltzen, Smith and Hobart Sts., Perth Amboy, WPA and owner's engr.

N. J., Hackensack—Bergen Co., Administration Bldg., drainage sys. ditches, masonry wall, various roads. $52,878. WPA. J. F. Sheehan, foot of 5 Ave., Paterson, WPA and owner's engr.

N. Y., New York—President Bronx Boro, 651 Grand Concourse, combined sewers, Kingsland, Westervelt, Mickle and Woodhull Aves. from Pelham Parkway N. to Astor Ave., $31,800; Viele Ave. from Hunts Point Ave. to Coster St. and Coster and Fail Sts. from Viele to East Bay Aves., $69,700; Tierney Pl. from E. 177 St. to Longstreet Ave., $26,000.

O., Canton—Stark Co., exten. sewer and water facilities, Edgefield Dist. $50,000. L. K. Zerbe, co. engr.

O., Massillon—1,734 ft. sanitary sewer from intersection 3 St. S.E. and Pearl Ave. S.E., to site proposed national defense housing, 1,434 ft. storm sewer 13 St. S.E. to site. $25,000-$30,000. C. E. Rice, Massillon, engr.

Pa., Hellertown—Boro Council, M. J. Dimmick, burgess, sanitary sewerage sys. and disposal plant. Over $25,000. D. W. Peffer, boro engr.

Tex., Mart—Sanitary sewerage sys. imprvs., expansion. $50,000. Koch & Fowler, Great Natl. Life Bldg., Dallas, engrs.

Tex., McKinney — F. D. Perkins, mayor, sewage disposal plant imprvs., addns. $80,000. Koch & Fowler, 701 Great Natl. Life Bldg., Dallas, engr.

Tex., Palacios — Sanitary sewerage sys. imprvs. $25,000 or more. Bonds voted. J. Montgomery, c/o Littlefield Bldg., Austin, engr. CD 7/1.

Wash., Seattle—Sewers, W. Viewmont Way. $160,000. C. L. Wartelle, County-City Bldg., engr.

BIDS ASKED

Bids Asked July 14

N. Y., New York — President Manhattan Boro, Municipal Bldg., rock excav. for construction sewer in Overlook Terrace from 187 St. to point 550 ft. northerly.

Bids Asked July 17

Ia., Fort Dodge—H. R. Sittig, city clk., grease removal unit, Tobin Packing Plant. $44,000. Buell & Winter, 508 Insurance Exchange Bldg., Sioux City, engrs.

Bids Asked July 28

N. Y., Jamaica—Dpt. P. Wks., Municipal Bldg., New York, Contr. 14-A, sludge drying beds and sludge lines, for Jamaica Sewage treatment works.

Bids Asked July 29

Pa., Erie—Erie Housing Auth., M. A. Zurn, chn., 12 E. 10 St., sanitary and storm water sewers, disposal plant, etc., grading, landscaping grounds, Harbor Homes housing (224 units). $35,000. Meyers & Johnson, Commerce Bldg., archt. CD 11/18—ENR 11/21.

★**Ont., Toronto**—Chn. Bd. Control, 1st stage sewage disposal plant, Fisherman's Island, comprising 1,400 ft. seawall, 3,300 ft. outlet conduit, 4 digestion tanks with sludge control building, sedimentation tanks, with sludge pump. sta. on top, all rein.-con., pile fdn. $5,600,000. Gore & Storrie, 1130 Bay St., engrs. CD 1/22—ENR 7/18.

★**Ont., Toronto**—Bd. Control, sedimentation tanks, digester tanks, equip., etc. in connection with Ashbridges Bay sewage disposal plant, 84 million imperial gal. per day cap, maximum 210,000,000 gal. cap. Over $1,000,000. Gore & Storrie, 1130 Bay St., consult. engrs. Metcalf & Eddy, Statler Bldg., Boston, Mass., assoc. engrs.

LOW BIDDERS

†Calif., Riverside—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., incinerator, Camp Haan, from L. P. Scherer, 208½ Orange St., Redlands. **$25,762.**

Calif., San Bernardino—Big Bear Co. Sanitation Dist., Courthouse, June 30, sanitary sewers, imhoff type sewage treatment plant, from Culjak & Zelko, 1354 S. Bonnie Beach Pl., Los Angeles. **$121,847.** CD 6/16—ENR 6/19.

La., Baton Rouge—Dpt. Institutions, Baton Rouge, J. E. Snee, dir., June 30, sewage disposal plant, Greenwell Springs Hospital, from Barber Bros. Contg. Co., Reymond Bldg., Baton Rouge. **$67,252.** CD 6/16—ENR 6/19.

†Mo., Jefferson Barracks—U. S. Eng., 816 Court House & Custom House, St. Louis, Mo., incinerator, Military Post, Inv. 1103-41-241, from E. A. Brunson Constr. Co., 4052 Forest Park Blvd., St. Louis. **$22,772.**

CONTRACTS AWARDED

†Calif., Lemoore—U. S. Eng., 208 Postoffice Bldg., Sacramento, sewage disposal plant, Flying School, to F. Ziebarth, Security Bldg., Long Beach. **$47,300.** Est. $47,300. CD 6/19.

†Calif., Merced—U. S. Eng., 208 Postoffice Bldg., Sacramento, sewage disposal plant, Flying School, to H. B. Nicholson, Chamber of Commerce Bldg., Los Angeles. **$74,800.** Est. $60,044. Bids 6/28. CD 6/19.

†Calif., Stockton—U. S. Eng., 208 Postoffice Bldg., Sacramento, sewage disposal plant, Flying School, near here, to M.J.B. Constr. Co., Elks Bldg. **$64,946.** Est. $51,450. Bids 6/28. CD 6/25.

†Ill., Rock Island—War Dpt., 20 St. and Constitution Ave. N.W., sewerage sys., Rock Island Arsenal, to Drainage Constructors, Inc., 14375 Schaefer St., Detroit, Mich. **$213,000.** CD 6/11—ENR 6/26.

†Maryland—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 5 ton incinerator, U. S. Proving Ground, Aberdeen, and 5 ton incinerator, Holabird Q.M. Depot, Baltimore, to Morse Boulger Destructors Co., 504 St. Paul Pl., Baltimore. **$43,322.**

Minn., Cokato—L. Peterson, village recdr., sewage disposal plant, to C. G. Victorson & Co., 3352 Elliot Ave., Minneapolis. **$40,250.** CD 2/13—ENR 2/20.

N. J., Englewood—Boro, pump. station, Cedar Lane, facilities for runoff storm water to relieve flood conditions, Metzler's Brook. **WPA. $57,868.** J. F. Sheehan, foot of 5 Ave. Paterson, WPA and owner's engr.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, combined sewer and appurtenances, Owls Head Court from 68 St. to Bay Ridge Ave. and Bay Ridge Ave. from Owls Head Court to Belt Parkway. **WPA. $54,731.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Flushing — President Queens Boro, Boro Hall, 120-55 Queens Blvd., Kew Gardens, catch basins. **WPA. $53,900.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kew Gardens — President Queens, Boro Hall, 120-55 Queens Blvd., storm drains. **WPA. $61,406.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Kew Gardens—President Queens Boro, Boro Hall, 120-55 Queens Blvd., storm drains, etc., 20 Ave. and 37 St. **WPA. $80,441.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, catch basins, curbs. **WPA. $122,820.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York — President Manhattan Boro, Municipal Bldg., reconstructing existing 4x3 ft., brick sewer with new 4x5 ft. and 4x4 ft. FTRC sewer, appurtenances, 7 Ave. between 124 and 130 Sts., **$164,124;** and reconstructing brick sewer, W. 124 St. between 7 and St. Nicholas Aves., **$191,950. WPA.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, storm drains, sanitary sewers. **WPA. $376,407.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

Pa., Erie—M. J. Henry, city clk., City Hall, 32 and 39 in. rein.-con. storm water sewer, 19 St. and Camphausen Ave. area, own forces under supervision C. K. Pulling, deputy city engr. **$25,000.** A. N. Aitkin, city engr. CD 6/11—ENR 6/26.

Pa., Pittsburgh—Bd. Comrs., Baldwin Twp., J. W. Jordan, secy., Municipal Bldg., Churchview Ave., Baldwin Twp., Pittsburgh, sewers Agnew, Custer, E. Willock Rds., Baldwin Highlands and Baldwin Heights, to J. Recovery, 705 Hays Ave. **$26,867.**

Tex., Brackettville—Sewage collecting sys. and disposal plant, **WPA. $120,000.** Engineer, c/o C. B. Ballantyne, Brackettville.

†Tex., Fort Worth—U. S. Eng., Citizens Bank Bldg., Denison, storm sewerage sys. in military area of Bomber Assembly Plant, to Gifford Hill Co., Mercantile Bldg., Dallas. Approx. **$190,000.**

Tex., Pharr—A. A. Kely, mayor, concrete storm sewers, Cage Blvd., **WPA. $50,000.**

†Wash., Fort Lewis—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., June 28, storm sewerage sys., Fort Lewis and 41st Div. National Guard Cantonment, from Valley Constr. Co., 8423 48 Ave. S., Seattle. **$137,690.**

BRIDGES, GRADE CROSSINGS

PROPOSED WORK

Calif., Long Beach — 726 rein.-con. bridge over Los Angeles River, Artesia Rd. $212,000. G. E. Baker, city engr.

Illinois—State Dpt. P. Wks. & Bldgs., Div. Hys., Springfield, overcrossing for relocation S.A. Route 5, across tracks C., B. & Q. R.R., Ogee Co. E. Liebermann, Centennial Bldg., Springfield, engr.

Ill., Joliet—Chicago, Rock Island & Pacific R.R. W. H. Hillis, asst. ch. operating officer, LaSalle St. Station, Chicago, subway at Bluff St. crossing. $85,000. Cost to be borne by city and railroad.

Mo., Columbia—R. Barrett, mayor, steel, concrete bridge. $75,000. Sverdrup & Parcel, Railway Exch. Bldg., St. Louis, engrs. CD 4/24—ENR 5/8.

★**N. Y., New York**—Boro President Broo... Boro, 851 Grand Concourse, underpass at Eastern Blvd. and Tremont Ave. ...,000.

O., Newark—Licking Co. replac... covered bridge with steel span ... River below Black Hand Gorge ... $100,000.

Okla., Ada—State Hy. Dpt., Oklahoma City, preliminary plans overpass over ... Ry. Co. lines, 2 mi. north of her... V. T. Moon, Oklahoma City engr.

Okla., Antlers—State Hy. Dpt., Oklahoma City, preliminary plans new overpass ... Frisco Lines, Pushmataha. $40,0... Moon, Oklahoma City, engr.

★**Pennsylvania**—Bd. Comrs. Allegheny Co., Pittsburgh, bridge over Monongahela Riv... and 3 railroads, between Whitaker and Ran... $3,500,000.

Pennsylvania—Hy. Dpt., I. L. Hughes, secy., Harrisburg, altering 3 grade crossing, abolition 2 crossings, constructing 4, 1 to be temporary, at points where State Hy. Rte. ... and connecting twp. roads are or will be crossed by a single track of West Penn Rys. Co., in Connellsville, Connellsville Twp. and Bullskin Twp., Fayette Co. $61,858. T. C. Frame, c/o owner, ch. engr.

★**Pa., Dauphin**—Pennsylvania Hy. Dpt., ... L. Hughes, secy., Harrisburg, underpass to carry U. S. Route 22 under tracks Pennsylvania R.R. as relocated, relocating railroad tracks and constructing new hy. through boro. $650,000. T. C. Frame, c/o owners, ch. engr.

Tex., Port Isabel—Cameron Co., c/o Judge Brownsville, steel, concrete, heavy timber causeway, linking Port Isabel and Padre Island. $400,000. Bond election soon.

Tex., San Antonio — Bexar Co., c/o ... Anderson, judge, Court House, defeated bonds rein.-con., steel bridge. $175,000. Engineer, c/o F. H. Reichert, co. engr., c/o Court House. CD 6/2—ENR 6/5.

BIDS ASKED

Bids Asked July 15

Indiana — State Hy. Comn., Indianapolis, bridge over ditch, Contr. 2181, Noble Co.; bridge over Majenica Creek, Huntington Co.; rein.-con. girder exten. over Little Majenica Creek, rein.-con. girder exten. over Little Majenica Creek, all foregoing Huntington Co.; removal of abutment and adjacent fill of abandoned interurban bridge over Wabash River N. edge of Bluffton, Wells Co.; steel beam bridge over Sandy Creek, contr. 2181 Jackson Co.; bridge over White Lick Creek at west edge of Bridgeport, Contr. 2184 Marion Co.; rein.-con. girder over Vlecks Ditch, 2.2 mi. south of Vincennes, bridge over Pond Creek, 3.6 mi. west of Wheatland, steel truss over Kessinger Creek, 2 mi. south of Wheatland, Vincennes Co.; rein.-con. girder over Iroquois River, in southern part Rensselaer, Jasper Co.; rein.-con. girder over Old Channel of Big Creek, 5.5 mi. north of Mt. Vernon, Posey Co.; continuous steel beam bridge over Blue River, at Fredericksburg, Washington Co.

Iowa—State Hy. Comm., Ames, 5 rein.-con. box culverts, 102x22 ft. continuous I-beam bridge, FSN 587 A (1), Boone Co.; 2 50x22 ft. I-beam bridges, FSN 6B (1) Calhoun Co.; 8 rein.-con. box culvert extens., FA 823 B (1) Dickinson Co.; 13 rein.-con. box culverts and extens., FSN 720 A (1) Osceola Co.; 3 rein.-con. box culverts and exten., 1 36x24 ft. I-beam bridge, FA 745 C (1) Pocahontas Co.; 2 110 ft. continuous I-beam undergrade crossings, pump. plant, lighting sys. FAGM 216 C Polk Co.; one 150x24 ft. continuous I-beam bridge, FA 6 (3) S.H. 3,; one 120x24 ft. continuous I-beam bridge, FA 123 ABC (4) S.H. 3 east of Mt. Ayr; one 20x24 ft. I-beam bridge FA 142 (3) S.H. 3, all foregoing Ringgold Co.; 10 rein.-con. box culverts and exten. continuous I-beam bridges, FA 521 B (1) S.H. 25, Shelby Co.; 4 rein.-con. box culverts, two I-beam bridges, FAS 226 C (1) Story Co.

O., Lowellville—Mahoning Co., Youngstown, span over Mahoning River. $125,000. Extended date. R. J. Schomer, Youngstown, co. engr. CD 6/11—ENR 6/19.

Bids Asked July 17

Florida — State Road Comn., Tallahassee. T. A. Johnson, ch., J. H. Dowling, state hy. engr., overpass, steel I-beam spans, rein.-con. paving, 2.708 mr. State Road 8-A, FAP No. SN-FA 175-G(2) Operating 3045 and FA grade Cross. Proj. SN-FAGM 275-B(1)(Om) Operating No. 4120, Lake Co.; drainage structures, rein.-con. paving 3.075 mi. State Rd. 76, FAP SN-FA-131(3), SN-FA-131-D(1), and Fed. Aid. Grade Cross. Proj. SN-FAGH-131-C(1) Part 2, Operating Nos. 3143, 3158 and 4118, Leon Co.

Wisconsin—State Hy. Comm., Madison. Embarrass River bridge and approaches. Bridge 304, 65 ft. span I-beam on timber abutments. S.T.H. 29 Tilleda Rd., Shawano Co.

Bids Asked July 22

Pa., Pittsburgh—Bd. Comrs. Allegheny Co., R. G. Woodside, controller, Court House, bridge reconstruction, Bridge 1, Lewis Run, Jefferson Twp. Over $25,000. Levi Burd Duff, County Office Bldg., engr.

Bids Asked July 23

Maryland and **Virginia**—State Roads Comm., Baltimore, Contr. 7, fenders for main span piers for Potomac River Bridge between Ludlow Ferry, Md. and point near Dahlgren, Va. L. H. Steuart, secy.; adv. ENR 7/10.

BRIDGES, etc. (Bids Asked, Cont'd.)

Bids Asked July 24

Calif., Los Angeles—State Hy. Dpt., 808 State Bldg., Los Angeles, 2 bridges, Figueroa St., Amador St. and Solano Ave. Over $25,000. C. H. Purcell, 808 State Bldg., engr.

Bids Asked July 29

New York—State Dpt. P. Wks., A. W. Brandt, supt., State Office Bldg., Albany, raising Barge Canal Bridge O-11, Oswego, Sta. 1185 plus 13, Oswego Co., Contr. U.S. 67; adv. ENR 7/10.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, June 27, bridge over Shades Creek, Jefferson Co., from W. C. Howton Contg. Co., 3904 N. 10 Ave., Birmingham. **$147,890.** CD 6/19.

California—C. H. Purcell, engr. State Hy. Dpt., Sacramento, June 26, 2 rein.-con. bridges, Bishop's Rd. and N. Figueroa St., from Contracting Engineers Co., 2310½ W. Vernon Ave., **$51,836.** Received no bids June 26, superstructure bridge, over Los Angeles River, Figueroa St., Los Angeles. CD 6/3 and 6/9—ENR 6/5 and 6/12.

Minnesota—State Hy. Dpt., St. Paul, June 27, bridge 5962, St. Paul, P. 62-507-01, from C. F. Sculley Equipment Co., 519 Guardian Bldg. **$131,949.** CD 6/18.

Missouri—State Hy. Comn., Jefferson City, June 27, bridge over Wabash R.R. tracks, Route SMM, Proj. FAGH 573 B1, St. Louis Co., from Chernus Constr. Co., 911 N. 11 St., St. Louis. **$62,373.** CD 6/24.

New Hampshire—State Hy. Dpt., Concord, June 26, bridge, Orange, Grafton Co., from Bennington Constr. Co., Bennington, Vt. **$63,964.** Est. $70,000. CD 6/26—ENR 6/19.

Tennessee—State Hy. Comh., Nashville, June 27, overhead and approaches, N.C. & St.L.Ry. Hy. 76, Henry Co., from McDade & McDade, Fulton, Ky. **$62,060.** CD 6/16—ENR 6/19.

Texas—D. C. Greer, state hy. engr., Austin, June 27, Neches River Bridge and 3 relief bridges, Angelina and Polk Counties, from Ben Sira & Co., 3901 Elm St., Dallas, **$118,511** ***overpass, roadway approaches, Milam Co., from P. and B. Constr. Co., 112½ W. 9 St., Fort Worth, **$91,758,** est. $95,000***Copano Bay Causeway, roadway approaches, Aransas, Refugio and San Patricio Counties, from Dodds & Wedegartner, San Benito, **$98,627,** est. $100,000. CD 6/18.

†Va., Great Bridge—U. S. Eng., Norfolk, Va., June 30, symmetrical double swing highway bridge over Inland Waterway, from Carpenter Constr. Corp., 700 Bank of Commerce Bldg., Norfolk. **$211,723.** Est. $175,055. Bids 6/30. CD 6/10—ENR 6/12.

CONTRACTS AWARDED

Arkansas—State Hy. Comm., Little Rock, bridge, Miller Co., to Pioneer Constr. Co., Malvern. **$75,978.** Est. $80,000. Bids 7/2. CD 6/26.

Kansas—State Hy. Dpt., at office Co. Clk., Howard, Bridge 3.3, Elk Co., to Rhoades Constr. Co., Newton, **$26,982***Bridge 27.9, Bourbon Co., to F. H. Freeto, Pittsburg, **$34,213.** Bids 6/20, awarded 6/27. CD 5/11.

N. J., Elizabeth—Union Co., Courthouse, rein.-con. pipe bridges Liberty Ave., New Providence and steel beam bridge Orchard St., Rahway, to S. B. Constr. Co., 53 Ashwood Pl., Summit. CD 6/20.

South Carolina—State Hy. Dpt., Columbia, 150 ft. rein.-con. bridge over Colonel's Creek Richland Co., own forces. Bids 6/17. Rejected bids June 17, 150 ft. rein.-con. bridge over Steel Creek, York Co. CD 6/9—ENR 6/12.

Tex., Hearne—Robertson Co., c/o S. Rogers, judge, bridge across Little Brazos River, 2 mi. west of here. **WPA. $68,500.**

Vt., St. Johnsbury—State Hy. Dpt., H. E. Sargent, ch. engr., Montpelier, highway overpass SN-FAGM 118 D-(3), to Chas. I. Hosmer, Inc., 87 Prospect St., Greenfield, Mass. **$289,760.**

STREETS AND ROADS

BIDS ASKED

Bids Asked July 14

Connecticut—State, W. J. Cox, Hartford, bituminous macadam paving 25,445 ft. hy. Morris and Litchfield; repairing rein.-con. bridge, Derbey and Shelton; viaduct, grading, drainage work, Hartford; grading, drainage 16,420 ft. Meridan-Wallingford trunk line; repairing Cornwall Bridge, Sharon and Cornwall; constructing scale bit, 335 ft. bituminous macadam approaches Stratford; fabricating, shipping, del. all steel for bridge over Maxim Rd., Hartford; rolled bank run gravel surfacing 7,132 ft. Bloomfield; 17,000 ft. hy. Washington.

N. J., Hammonton—Surface treatment Line St., etc. Adams & Rehmann, Inc., 305 Central Ave., Hammonton, engrs.

Bids Asked July 15

Iowa—State Hy. Comm., Ames, grading 3.942 mi. FSN 596 A(1) Adair Co.; FA 823 B(1) U. S. 71, Dickinson Co.; 6.849 mi. FA 864 B(1) S.H. 184, Fremont Co.; 1.433 mi. FSN 576 A(1) Co. Trunk Rd. E; 6.108 mi. FSN 579 A(1) Hamilton Co.; 4.961 mi FNS 726 A(1) Co Trunk Rd. A, Osceola Co.; 4.802 mi. FA 745 C(1) S.H. 10, Pocahontas Co.; 4.904 mi. FA 521 B. S.H. 191, Shelby Co.; 4.685 mi. FA 849 A(1) S.H. 98, Wapello and Davis Counties; roadside imprv., grading 8.033 mi. FA 845 A U.S. 61, Lee Co.; concrete paving 3.853 mi. FA 823 B(1) U.S. 71, Dickinson Co.; paving 4.802 mi. FA 745 C(1) S.H. 10, Pocahontas Co.; grading, paving 0.224 mi. FA 216 D, S.H. 163, in Des Moines, Polk Co.; surfacing 10.091 mi. FSN 330 Co. Trunk Rd. C, Dallas Co.; 3.926 mi. FM 25, Co. Trunk S; 2.517 mi. FM 26, on Local Rd.; 3 mi. FSN 186 Co. Trunk A; 4.433 mi. FSN 210 Co. Trunk A; 5.218 mi. FSN 803, all foregoing Wayne Co., crushed stone surfacing 2.8 mi. FN 378 H. on Detour for S.H. 136; 11.7 mi. FN 841 A, on Detour for S.H. 136, both Dubuque Co.; 6.109 mi. FSN 579 A, Co. Trunk Rd. A, Hamilton Co.; 5.205 mi. FN 830 A, S.H. 113, Jackson Co.; gravel surfacing 4.961 mi. FSN 720 A, Co. Trunk Rd. A, Osceola Co.; 4.904 mi. FA 521 B, S.H. 191, Shelby Co.; 4.121 mi. FM 24 Co. Trunk Rd. H, Wayne Co.; gravel or rock surfacing 4.685 mi. Wapello and Davis Counties.

Kansas—State Hy. Dpt., at office Co. Clk., Columbus, single asphalt surface treatment 11.382 mi. K4608 ABC, 6.06 mi. K4887, 4.589 mi. K4609, all foregoing Montgomery Co.; 9.138 mi. K4600, 1.31 mi. K4601, both Cherokee Co.; 4.808 mi. K4605, AB, 3.558 mi. K4885, both Crawford Co.; 5.433 mi. K4150, Allen Co.; 12.426 mi. K4147, Part 1, 0.168 mi. K4147, Part 2, both Linn Co.; 7.836 mi. K4152, Elk Co.; 2.849 mi. K4151, Neosho Co.; 1.797 mi. K4886, Labette Co.; 10.87 mi. K4606, Franklin Co.; 17.56 mi. K4599, Chautauqua Co.; 22.51 mi. K4598, Bourbon Co.; resurfacing material 3 mi K4607, Linn Co.; grading, concrete paving 0.204 mi. K4139, Cherokee Co.

Mass., Falmouth—Commonwealth of Massachusetts, Dpt. P. Wks., H. L. MacDonald, comr., 100 Nashua St., Boston, bituminous macadam surfacing, rein.-con. bridge, 9,200 sq. yd. FAGH 191B(2). $65,000.

N. Y., Brooklyn—Triborough Bridge Auth. Administration Bldg., Randall's Island, New York, elevated parkway, paving Hamilton Ave. from Hicks to Clinton Sts., Contr. B-25; Madigan-Hyland, 28-04 41 Ave., Long Island City, consult. engrs.

Ohio—State Hy. Dpt., Columbus, bituminous treatment 33.95 mi. various sections SH 398, 161, 395, Athens, Gallia, Meigs and Vinton Counties, $55,314; 39.67 mi. SH 362, 363, 615, 10, 243, 453 and 657, Madison and Pickaway Counties, $22,014; 39.1 mi. SH 907, 115, 117, 236, 228 and 112, Marion and Union Counties, $23,190; 31.57 mi. SH 335, 206, 114, 111, 336, 656 and 573, Delaware, Marion and Morrow Counties, $18,396; 37.98 mi. SH 50, 1, 453, 546, 814 and 59, Delaware and Franklin Counties, $17,901; 45.17 mi. SH 155, 160, 554, 870, 397, 671 and 913, Athens, Hocking and Vinton Counties, $72,982; 37.2 mi. SH 75, 371, 379, 677, 378, 442, Carroll, Harrison and Jefferson Counties, $58,970; 70.41 mi. SH 101, 102, 103, 104, 106, 295 and 380, Belmont, Harrison and Jefferson Counties, $79,774; 66.07 mi. SH 259, 556, 197, 906, 944, 6, 924, 239, 194, 608, Fayette and Madison Counties, $38,-454; 26.52 mi. SH 890, 466, 90, 930, 34, 36, 555, 604, Cuyahoga and Lake Counties, $30,839; grading, drainage structures, asphaltic concrete on waterbound macadam paving, concrete beam bridge, substructure, 0.198 mi. Sect. C, SH 13, Ashtabula Co., $30,250; 2.225 mi. Sect. C and Aurora, SH 651, Portage Co., $38,600; installing new creosoted strip flooring and painting existing stringers and floor beams on steel truss bridge over Hocking River Sect. F, SH 539, Athens Co., $3,940; new creosoted strip flooring guards and painting existing structural steel on 3 steel beam bridges over Hewitts Fork, Sect. A, SH 630, Athens Co., $3,390; painting 3 existing bridges, Coshocton, Knox and Fairfield Counties, $3,-785; grading, drainage structures, 0.027 mi. Sect. F, SH 541, Cuyahoga Co., $4,900.

Bids Asked July 17

Nevada—Directors State Hy. Dpt., Carson City, constructing 5.04 mi. portion S.H. Sys., from junction with State Route 8A, Nye Co.; 6.31 mi. State Route 7 to Prince Mine, Lincoln Co. R. A. Allen, state hy. engr.

N. J., Trenton—Paving W. State, Calhoun, Chambers, Mifflin, Second, Rose and Mercer Sts. $135,500. J. E. English, City Hall, engr.

Tex., Longview—W. Morgan, city mgr., grading, drainage, concrete paving, curbing, guttering, storm sewers. $90,000.

Wash., Seattle—Widening paving, curbing, Mission Ave. from Trent Rd. to Mission Ave. bridge. A. D. Butler, City Hall, engr.

Wisconsin—State Hy. Comm., Madison, grading, draining, roadside treatment and concrete surfacing 4.912 mi. Carrollville-USH 45 Rd. SN-FAP 480 A(1) S.T.Hy. 100, Milwaukee Co.; 4.097 mi. Auburndale-Sherry Rd. FAP 353 (2) U.S.Hy. 10, Wood Co.; concrete surfacing 9.585 mi. Dubuque-Platteville Rd., Dickeyville-Platteville Rd., Grant Co.; grading, draining, bituminous surfacing 1.941 mi. Cazenovia LaValle Rd., FAS 171 C (1) S. Trunk Hy. 58, Sauk Co.; grading, draining, roadside treatment 5.512 mi. Madison-Milwaukee Rd., Madison Lake Mills Rd., Dane and Jefferson Counties; grading, draining, 5.045 mi. New Richmond-Bloomer Rd. St. Croix Co.; 15.481 mi. Spooner-Superior Rd., Trego-Minong Rd., Washburn Co.

Bids Asked July 18

★**Pennsylvania**—State Hy. Dpt., I. L. Hughes, secy., Harrisburg, paving 11.374 ft., grading railroad bed, rein.-con. paving 8.915 ft. bridge, rein.-con. underpass bridge, etc., Legislative Route 1, Traffic Routes 11 and 22, Dauphin Boro, Middle Paxton Twp., over $500,-000; rein.-con. paving 9,750 ft., rein.-con. box and exten. existing arch, Legislative Route 294, Sect. 1, Traffic Route 78, French Creek Twp., New Lebanon Boro, Mercer Co., over $25,000; resurfacing existing paving with bituminous surfacing 20,222 ft. Sect. 1-R, Traffic Route 189, Wayne Twp., Erie Co., over $25,000; resurfacing existing paving with bituminous surface 20,255 ft. Legislative Route 84, Sect. 2-R, Erie Co., over $25,000; rein.-con. paving 31,542 ft., exten. 3 existing structures, Route 157, Sect. 12, Traffic Route 222, Temple Boro, Muhlenburg, Ontelaunee and Maiden Creek Twps., Berks Co., over $25,000; overhead bridge, rein.-con. paving, Route 281, Sect. 1-A, Traffic Route 1, Morrisville Boro, Bridge St., Bucks Co., over $25,000; widening, rein.-con. paving, grading 6,588 ft. Route 114, Sect. 1-W, Traffic Route 40, Buffalo, Canton and North Franklin Twps., Washington Co., over $25,000; bituminous surfacing 3,406 ft. Legislative Route 161, Sec. 11, Traffic Route 343, Girardville Boro, Schuylkill Co.; 11,804 ft. Legislative Routes 279 and 61027, Appl. 1760, Traffic Routes 69 and 957, Sugar Grove Twp., Sugar Grove Boro, Warren Co.; removing portion railroad bridge, Legislative Route 39, Sect. 2-C, Traffic Route, West Providence Twp., Bedford Co. T. C. Frame, c/o owner, ch. engr.

Kentucky—State Hy. Dpt., Frankfort, grading, draining, high type surfacing 1.5 mi. Bickel Lane Rd., RH 37, Jefferson Co.; resurfacing 3.055 mi. Smithland-Marion Rd., SN-SP 7-70, Livingston Co.; grading, draining, medium type surfacing 0.15 mi. road approaches to new railroad crossing at Crestwood, SP 93-76-93-216, Oldham Co.; bituminous surfacing 8.235 mi. Ballardsville-Eminence Rd., SP 62-207, 93-76-9356, Henry and Oldham Counties; 25.293 mi. Central City-Lewisburg Rd., SP 89-3, 89-23, 7-1, Muhlenberg and Logan Counties; medium type surfacing 0.904 mi. Uniontown-Smiths Mill Rd. SP 113-27 Union Co.; 3.19 mi. Dawson Springs-Providence Rd., MP R 54-260 A, Hopkins Co.; 11.856 mi. London-Manchester Rd. MP 6351-D, Laurel Co.; 7.034 mi. Salyersville Royalton Rd., MP 77-60 B, Magoffin Co.; 2.225 mi. Harveyton-Typo Rd. MP 97-182 B, Perry Co.; 8.896 mi. Poole-Sebree-Calhoun Rd., MP 117-49A, 117-1049 C, Webster Co.; bituminous surfacing 9.608 mi. Foree's Corner Lanes Landing Rd., Henry Co.; 1.6 mi. Hazard Chavies Rd. MP 97-162 C, Perry Co.; 2 additional concrete steel spans to existing bridge at Station Camp Creek near Irvine, Irvine McKee Rd. FAS 12 A(2) B, SP 33-63, Estill Co.

N. Y., New York—Comr. Parks, at office Dpt. Parks, Arsenal Bldg., Central Park, 5 Ave. and 64 St., imprv. Francis Lewis Blvd., paving from McLaughlin Ave. to Union Turnpike; grade separations at Grand Central Parkway, and 1,100 ft. of Union Turnpike, Queens Boro, Contr. F.L.B. 41-1.

R. I., Cranston (br. Providence)—City, Bd. Contr. & Purchases, City Hall, sheet asphalt paving Rolfe St.; penolithic asphalt paving Laurel Hill Ave. $25,000.

Bids Asked July 21

Mont. Sidney—C. G. Oland, city clk., grading, oil paving streets, avenues in Special Imprvt. Oil Paving Dist. 19. About $80,000. F. Lauster, Jr., city engr.

Wis., West Milwaukee—Paving W. Mitchell, S. 43 and S. 52 Sts. Steinhagen & Steinhagen, 2735 W. State St., Milwaukee, engrs.

Bids Asked July 22

Pa., Pittsburgh—Bd. Comrs. Allegheny Co., R. G. Woodside, controller, Court House, widening Bigelow Blvd., concrete bumpers from Grant to Webster Sts. over $25,000; paving exten. in Point area, over $25,000 Levi Burd Duff, County Office Bldg., engr.

Bids Asked July 25

O., Youngstown—Mahoning Co., resurfacing 25 mi. roads. $102,400. R. J. Schomer, co. engr.

Bids Asked July 29

†N. J., Lyons—Veterans Administration, Constr. Serv., Arlington Bldg., Wash., D. C., resurfacing roads.

†N. Y., Batavia—Veterans Administration, Constr. Serv., Arlington Bldg., Wash., D. C., resurfacing roads.

Bids Asked July 30

Delaware—State Hy. Dpt., F. V. Dupont, chn., Dover, widening, reconstructing 1.101 mi. SN-49A(5), St. Georges to Wrangle Hill, New Castle Co.; 6.146 mi. SN85A(3) and SN87 A(4), Odessa to St. Georges, New Castle Co.; adv. ENR 7/10.

Bids Asked

California—C. H. Purcell, engr. State Hy. Dpt., Sacramento, rejected bids June 11, imprv. 9.7 mi. Plumas Co. CD 6/18—ENR 6/26 under LB.

California—C. H. Purcell, engr. State Hy. Dpt., Sacramento, rejected bids June 18, imprv. 9.9 mi. Siskiyou Co. CD 6/24—ENR 6/26 under LB.

North Carolina—State Hy. & P. Wks. Comm., Raleigh, rejected bids June 26, imprv. 2.47 mi. Lincoln Co. $75,000-$100,000; 4.97 mi. Bertie Co. $50,000-$75,000. CD 7/1, under LB.

South Carolina—State Hy Dpt., Columbia, rejected bids June 17, imprv. 0.569 mi. Spartanburg Co. CD 6/24—ENR 6/26.

STREETS (Cont'd.)

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, June 27, imprv. 23.163 mi. Covington Co., from W. M. Ford, Lafayette, **$142,223**; 26.3 mi. Franklin Co., from W. L. Cobb, Decatur, **$25,417**. CD 6/19.

Ala., Gadsden—City, June 30, curbing, guttering, asphaltic concrete on slag macadam paving 35,577 sq. yd., from Southern Bitumen Co., 3200 Ave. A, Birmingham. **$62,958**. CD 6/16—ENR 6/19.

Arizona—State Hy. Dpt., Phoenix, July 1, imprv. 7 mi. Phoenix Prescott Hy., Maricopa Co., from Phoenix Tempe Stone Co., 13 Ave. and Buchanan St., Phoenix. **$135,708**. CD 6/23.

†Calif., Riverside—Con. Q.M., Camp Haan, June 27, paving roads, streets, etc., from Oswald Bros., 366 E. 58 St., Los Angeles, **$157,468**. CD 6/25.

Colo., Denver—City and Denver Co., City County Bldg., reconstructing roadway, adjusting curbing, repaving in making other incidental imprvs. in and for 16 St. roadway Imprv. Dist. 1, from Western Paving Constr. Co., 5200 Washington St., **$79,839**. A. K. Vickery, City and County Bldg., engr.

D. C., Wash.—District Comrs., District Bldg., June 23, grading streets, roads, alleys, avenues, from E. T. Shea & Co., 1321 Union St. S.W. **$28,800**.

Louisiana—State Hy. Dpt., Baton Rouge, June 25, imprv. 5.673 mi. S.P. 913-417, Vernon Parish, from W. R. Aldrich & Co., Box 2027, Baton Rouge, **$236,846**. CD 6/5—ENR 6/12.

†La., Alexandria—Con. Q.M., Camp Claiborne, July 1, additional camp roads, 65 mi. asphalt streets, 10.9 mi. asphalt resurfacing, 6.5 mi. asphalt treating present streets and 18.9 mi. asphalt shoulders, from Barber Bros. Contg. Co., Reymond Bldg., Baton Rouge, Item 1, **$46,097**; Item 10, **$53,428**; Item 11, **$25,577*****from Roy M. Lilly, Louisiana Natl. Bank Bldg., Baton Rouge; Item 3, **$43,457**; Item 4, **$25,704*****from Gregory & Hogan, Little Rock, Ark., Item 6, **$50,800**.

†La., Leesville—Con. Q.M., Camp Polk, June 25 10 mi. gravel access roads, from Glassell-Taylor Co., 1417 Dalzell St., Shreveport, **$216,162**. CD 6/17—ENR 6/19.

Maryland—State, Roads Comn., Baltimore, July 1, imprv. 2.621 mi. Contr. P-419-1-550, Prince George Co., from Reliable Contg. Co., Millersville, **$116,994*****0.602 mi. Contr. P-285-1-550, Prince George Co., from P. Reddington & Sons Co., 2 E. Lexington St., Baltimore, **$31,549*****3.188 mi. Co-154-211, Caroline Co., from Old Line Constr. Co., Chestertown, **$63,-889*****0.788 mi. Contr. Co-155-1-211, Caroline Co. and 0.502 mi. Contr. Wi-133-3-127, Wicomico Co., from Waller Paving Co., Salisbury, **$60,355** and **$33,869** respectively. CD 6/24—ENR 6/26.

Md., Baltimore—Bd. Awards, City Hall, June 25, imprv. streets, Contr. S.A. 749, from P. Flanigan & Sons, 2405 Loch Raven Rd. **$45,672**. CD 6/18.

†Mass., Ayer—Con. Q. M., Fort Devens, June 27, 22 mi. fort roads, from John McCourt Co., 910 Huntington Ave., Boston, and John R. Condon Corp., Coolidge Hill Rd., Watertown, **$172,000**.

★**Minnesota**—State Hy. Dpt., St. Paul, June 27, imprv. 99.68 mi. hy. Maintenance Dists. 1 and 3, Group 1, from Iowa Road Building Co., 1495 Keo Way, Des Moines, Ia., **$33,656*****82.36 mi. Maintenance Dist. 4, Group 2, from Ashworth-Hawkinson Co., St. Louis Park, **$44,126*****117.72 mi. Maintenance Dist. 5, Group 3, from C. L. Stodolka, Little Falls, **$37,411*****108.96 mi. Maintenance Dists. 6, 8 and 10, Group 4, from Duininck Bros. & Gilchrist, Olivia, **$43,322*****54.69 mi. Maintenance Dists. 7, 9, 11 and 14, Group 5, from Fergus Constr. Co., 380 Jackson St., St. Paul, **$33,249*****108.42 mi. Maintenance Dists 12, 15 and 16, Group 6, from J. W. Craig Co., 1814 California St., N.E., Minneapolis, **$38,139*****6.9 mi. S.P. 2804-01(Trunk Hy. 44-44) FAP 147 (5) from W. O'Neil & Sons Co., Faribault, **$178,-241*****6.2 mi. S.P. 0303-10(TH 34-34) FAP 518 C(1), from W. Collins & Sons Moorhead, **$82,589*****6.1 mi. S.P. 2103-03 (TH27-205) FAS 761 B(1) from C. H. Peterson & Co., 2920 27 Ave., S., Minneapolis, **$75,467*****5.7 mi. S.P. 8707-05 (TH 67-67) FAS 860 A(2) from G. A. Olson, Marshall, **$36,637*****6.6 mi. S.P. 1804-17 (TH 169-18) and S.P. 4814-14 (TH 169-18) FAPs, 51(5) and 170, from C. L. Nelson Co., Brainerd, and R. C. Jones, Deerwood, **$64,977*****7.2 mi. S.P. 4302-46 (TH 7-119) FAP 34 D(1) from Strom Constr. Co., Moorhead, **$64,787*****15.9 mi. S.P. 5804-17 (TH 48-192) from Farrell Contg. Co., 1607 Wynne St., St. Paul, **$102,215**. CD 6/11—ENR 6/19.

★**Missouri**—State Hy. Comn., Jefferson City, June 27, from Bridges Asphalt Paving Co., 1401 Central Industrial St. Louis, paving 3.795 mi. Pike Co. **$73.674*****from Illinois Valley Constr. Co., Ottawa, Ill., 1.379 mi. Pike Co. **$45,488*****from Perry McGlone Constr. Co., City Bank Bldg., Kansas City, 2.068 mi. Howard Co., **$207,421*****from Atkinson Windle Co., Chillicothe, 1.301 mi. Lincoln Co., **$70,988*****0.824 mi. Lincoln Co., **$45,881**; 1.307 mi. Lincoln Co., **$76,094**; 4.22 mi. Andrew Co., **$221,790*****4.331 mi. Andrew Co., **$250,042***** from Frenev Constr. Co., 72 Olive St., St. Joseph, 0.726 mi. Buchanan Co., **$49,236***** from Concrete Materials & Constr. Co., 405 Granby Bldg., Cedar Rapids, Ia. 3.841 mi. St. Charles Co., **$50,348**. CD 6/17—ENR 6/19.

New Hampshire—State Hy. Dpt., Concord, June 26, imprv. 3.502 mi. Cheshire Co., from D. M. Barnardi, Inc., Wellesley, Mass., **$164,-232**, est. $170,000; 4.809 mi. Merrimack Co., from John Iafolla Constr. Co., Dedham, Mass., **$354,706**, est. $300,000. CD 6/12—ENR 6/19.

New Jersey—E. D. Sterner, comr. State Hy. Dpt., Trenton, July 1, imprv. 1.524 mi. Camden Co., from Francis A. Canuso, 804 S. 12 St., Phila., Pa. **$70,719**. CD 6/16—ENR 6/19.

N. J., Linden—Grading, bituminous macadam paving, Elmwood and Rosewood Terraces, from Road Contg. Co., 714 Central Ave. Westfield, **$42,693**. J. Davidson, Town Hall, engr.

N. Y., New York—President Manhattan Boro, Municipal Bldg., July 1, imprv. Marginal St., from E. 30 to E. 49 Sts., Contr. 36, from Frank Mascali & Sons, Inc., 4634 3 Ave., **$179,925**. CD 6/23—ENR 6/26.

North Carolina—State Hy. & P. Wks. Comm., Raleigh, June 26, imprv. 2.47 mi. Lincoln Co. and 26.4 mi. Union, Cabarrus, Mecklenburg Counties, from Blythe Bros., 424 S. Brevard St., Charlotte, **$102,082** and **$68,700** respectively***4.09 mi. Rutherford Co., from W. W. Tuck & Son, Virgilina, Va., **$37,496*****5.36 mi. Jones Co., from Coastal Constr. Co., Florence, S. C., **$33,440*****4.97 mi. Bertie Co., from R. E. Fuller, Raleigh, **$76,870**. CD 6/17—ENR 6/19.

†N. C., Ft. Bragg—U. S. Eng., 1 and Douglas Sts., Wash., D. C., June 19, concrete paving and aprons, etc., Pope Field, from F. D. Cline and Leon Ellis, Greensboro, **$58,326**.

†N. C., Fort Bragg—Con. Q.M., June 24, 12 mi. sand clay roads, from E. W. Grannis, Fayetteville, **$75,000**. CD 5/22—ENR 5/29.

★**Pennsylvania**—State Hy. Dpt., Harrisburg, June 27, imprv. 42,360 ft. Berks and Montgomery Counties, from C. W. Good, Lancaster, **$668,979******7,799 ft. Tioga Co., from A. A. White, Inc., Lebanon, **$80,856*****20,953 ft. Tioga Co., from A. W. Hinaman, Williamsport, **$265,693*****7,480 ft. Lackawanna Co., from Collins & Maxwell, Inc., Easton, **$88,601*****3,000 ft. Delaware Co., from S. Ciccone, 432 N. Daggett St., Phila., **$46,075**. CD 6/10 and 19 and ENR 6/12 and 26.

†S. C., Charleston—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., roads and drainage, Stark General Hospital, from C. Y. Thomason, Greenwood, S. C. **$31,500**.

Tennessee — State Hy. Comm., Nashville, June 27, imprv. 0.958 mi. Sullivan Co., from Stacy Bros. Co., Johnson City, **$103,840***** 15.522 mi. Weakley and Carroll Counties, from Inter State Constr. Co., 3rd Natl. Bank Bldg., Nashville, **$179,790***** 2.741 mi. Blount Co., from Pittman Constr. Co., 537 Plaster Rd., Atlanta, Ga., **$201,530**. CD 6/16—ENR 6/19.

★**Texas**—D. C. Greer, engr. State Hy. Dpt., Austin, June 27, imprv. 13.947 mi. Parker Co. and 0.85 mi. Brazoria Co., from L. H. Lacy Co., 3009 N. Henderson Ave., Dallas, **$381,360** and **$40,551** respectively, est. $375,000 and $40,000 respectively***7.273 mi. Limestone Co. and 7.084 mi. Jim Wells Co., from Cage Bros. and L. A. Turner, Bishop, **$97,187** and **$129,198** respectively, est. $98,000 and $130,198 respectively***4.146 mi. Washington Co., from Cage Bros. and H. E. Williams, Bishop, **$89,126**, est. $90,000***7.633 mi. Williamson Co. and 3.237 mi. Morris and Cass Counties, from Geo. Kies, Inc., 1700 Pease Rd., Austin, **$197,289** and **$82,731** respectively, est. $200,000 and $83,000 respectively***12.336 mi. El Paso Co., from Lee Moor Contg. Co., Bassett Tower, El Paso, **$291,009**, est. $290,000*** 6.852 mi. Stephens Co., from P. and B. Constr. Co., 112¼ W. 9 St., Fort Worth and F. Hall, Waco, **$152,586**, est. $155,000***2.567 mi. Angelina and Polk Counties, from R. C. Buckner, Box 609, Jacksonville, **$159,460**, est. $165,-000***6.813 mi. Culverson and Jeff Davis Counties, from H. Page, Fiskville Rd., Austin, **$43,700**, est. $45,000***6.312 mi. Commanche Co., from H. L. Campbell, 1205 6 Ave., Fort Worth, **$48,790** est. $50,000***12.936 mi. Mills Co., from E. Loyd, Box 1077, Fort Worth, **$46,810**, est. $48,000*** 7.141 mi. Hill Co. from from K and S. Constr. Co., 2151 Fort Worth Ave., Dallas, **$77,034**, est. $77,000***0.825 mi. Dallas Co., from Austin Road Co., 1318 Clarence St., Dallas, **$96,945**, est. $100,000*** 6.865 mi. Wood Co., from Harrison Eng. & Constr. Co., 903 Fairfax Bldg., Kansas City, Mo., **$156,299**, est. $158,000***9.204 mi. Baylor Co., from Southern Constr. Co., 2525 Harris Blvd., Austin, **$56,723**, est. $58,000***9.077 mi. Van Zandt Co., from Luther Kay, Jr., Tyler, **$61,207**, est. $63,000***9.256 mi. Harris Co., from Haden & Austin, 414 1st Nat'l. Bank Bldg., Houston, **$105,642**, est. $106,000*** 8.846 mi. Morris, Camp and Upshur Counties, from Howard Bros., Madisonville, **$39,203**, est. $40,000. Rejected bids 6/27, imprv. 7.788 mi. Wilson Co. CD 6/6 and 6/18—ENR 6/12.

†Tex., Mineral Wells—Con. Q.M., Camp Wolters June 25, 7.18 mi. access roads, timber bridge, removal and replacement bridge, from Austin Bridge Co., 1813 Clarence St., Dallas., **$101,698**. CD 6/18.

†Virginia — Pub. Roads Administration, Winder Bldg., Wash., W. C., June 19, 2 tunnels, Blue Ridge Parkway, Amherst and Rockbridge Counties, from Ralph E. Mills Co., Frankfort, Ky. **$181,923**. CD 5/27—ENR 6/5.

Virginia—Dpt. Hys., Richmond July 1 imprv. 3.47 mi. and 3.6 mi. Warwick Co., from Hechler Bros., Highland Springs, **$87,332***** 6.1 mi. and 2.2 mi. Pulaski and Wythe Counties, from W. E. Graham & Sons, Hillsville, **$129,140*****1.8 mi., 0.03 mi. and 1.47 mi. Henrico Co., from R. K. Williams, 104 Hillcrest Ave. W., Richmond, **$87,297*****2 mi., 9.9 mi., and 1 mi. Charlotte and Halifax Counties, from Bowers Constr. Co., 805 W. South St. Raleigh, N. C., **$154,026**. CD 6/23—ENR 6/26

Wash., Seattle—City, July 3, removing street car tracks, paving 10 Ave. W. and adjacent streets, from T. Romano, 1833 Dearborn St. **$38,950**. C. L. Wartelle, County City Bldg., engr.

Wash., Yakima—Yakima Co., June 25, grading, ballasting, surfacing 19 mi. road, from Joslin & McAllister, N303 Haven St., Spokane **$91,921**. CD 6/16.

†Wis., Manitowoc—Federal Works Agency, Wash., D. C., June 21, paving, walks, sewers, waterworks sys., from Bahr Constr. Co., 2264 S 10 St. **$100,149**.

CONTRACTS AWARDED

Arkansas—State Hy. Dpt., Little Rock, imprv. 6.3 mi. Lincoln Co., to Reynolds & Sutton, Tyler, Tex. **$70,378**. CD 6/24—ENR 6/26.

N. J., Hackensack—Bergen Co., Administration Bldg., grading, penetration macadam paving, **WPA**. **$55,500**. J. F. Sheehan, foot of 5 Ave., Paterson, WPA and owner's engr.

Calif., San Francisco—Property Owners, c/o Contractor, grading, asphaltic concrete paving, concrete curbing, guttering portions 32, 33 and 34 Aves. between Pacheco Sts., to C. L. Harney, Call Bldg. **$38,460**.

★**†Fla., Starke**—Con. Q.M., Camp Blanding, 160 mi. roads inside Camp Blanding area, to L. B. McLeod Constr. Co., Orlando, and H. E. Wolf Constr. Co., St. Augustine. **$923,000**.

†Ga., Conley—Con. Q.M., 101 Marietta St. Bldg., Atlanta, additional paving, to H. McMath, Columbus, and Sam Finley, 292 North Ave. N.W., Atlanta, **$71,241**.

Ill., Rockford—**Paving** 2.6 mi. Auburn St. and Springfield Ave., to Ray Mann Constr. Co., Rockford. **$91,886**.

Kansas—State Hy. Dpt. at office Co. Clk., Howard, imprv. 0.766 mi. Bourbon Co. and 6.242 mi. Cherokee Co., to F. H. Freeto, Pittsburg, **$28,751** and **$54,940** respectively***4.225 mi. Elk Co. and 1.967 mi. Chautauqua Co., to List & Clark, 414 Railway Exch. Bldg., Kansas City, Mo., **$51,164** and **$56,874** respectively. Est. $191,729. CD 6/11.

Kansas—State Hy. Dpt. at office Co. Clk., Manhattan, imprv. 7.401 mi. Atchinson Co., to Bert Metzger, Ozawkie, **$33,135*****4.406 mi. Pottawatomie Co and 7.623 mi. Riley Co., to List & Clark, 414 Railway Exch. Bldg., Kansas City, Mo., **$33,521** and **$112,437** respectively. Grand total $179,093. CD 6/11.

Kansas—State Hy. Dpt. at office Co. Clk., Winfield, imprv. 2.239 mi. FA 564 D and C 3.312 mi. FA 564 B, Cowley Co., to G. Bennett Constr. Co., 901 N. 3 St., Kansas City, Kan. **$89,653** and **$127,790**. Bids 6/19, awarded 6/27. CD 6/11.

Maine—State Hy. Dpt., L. D. Barrows, ch. engr., Augusta, imprv. 1 mi. Nobleboro, to Wyman & Simpson, Inc., 284 Water St., Augusta. **$37,702**; imprv. 1.17 mi. Winthrop to Hector J. Cyr Co., Inc., 65 Temple St. Waterville, **$50,258**. Bids 6/25, awarded 6/27. CD 6/18.

Massachusetts—Dpt. P. Wks., Boton, imprv 49,030 sq. yd. hy. Shirley, to J. J. Callahan, 9 Barnes St., Dorchester. **$158,651**. Bids 5/6 CD 4/22—ENR 4/24.

Massachusetts—Dpt. P. Wks., Boston, bituminous macadam hy. bridge reconstruction, Norton, to John Deveney & Co., 17 St. Ann St., Jamaica Plain. **$193,193**. Bids 5/20 CD 5/5—ENR 5/8.

Massachusetts—Dpt. P. Wks., Boston, imprv. 62,050 sq. yd. Falmouth and Mashpee, to S. Rotondi & Sons, 140 Franklin St., Stoneham. **$246,208**. Bids 6/3. CD 5/20—ENR 5/22

Massachusetts—Dpt. P. Wks., Boston, bituminous macadam surfacing 47,170 sq. yd. FAS 9-C(1) Westport, to Middlesex Consty. Co., 5 Arlington Pl., Framingham. **$226,766**. Bids 6/18.

†Mass., Falmouth—Con. Q.M., Camp Edwards, roads, incl. Connery Ave. Rd., to B. Perini & Sons, Inc., Montwait Ave., Framingham. **$79,063**. Bids 6/28. CD 6/25.

†Mich., Mount Clemens—U. S. Eng., 665 Federal Bldg., Detroit, rein.-con. paving, shoulders, draining, etc., Selfridge F'ld, to Thomas E. Currie, 2531 Conner Ave., Detroit. **$116,678**. Bids 6/16.

Minnesota—State Comr. Hys., State Hy. Dpt., St. Paul, imprv. 12 mi S.P. 5803-67 (Trunk Hy. 23-185) and S.P. 0901-22 (TH 23-185) SN F.A.P. I (2) and 420 C(3), to Hector Constr. Co., Hector, **$108,708**; 9.1 mi Proj. 22-501-06, Faribault Co., to Booth & Olson, 622 Insurance Exch. Bldg., Sioux City, Ia., **$27,752*****5.1 mi. P. 52-503-01, FAS 144 A(1) Nicollet Co., to L. H. Mork, 5051 Drew Ave. S., Minneapolis, **$11,555**. Grand total $168,015. Bids 6/20. CD 6/4 and 6/6—ENR 6/12.

Mont., Butte—B. Wilson, city clk., road imprvs. **WPA**. **$275,324**.

STREETS, etc. (Contracts Awarded, (Cont'd.)

Mo., Independence—Street paving, etc. **WPA. $300,000.** R. H. Jones, city engr.

Mont., Chinook—Blaine Co., P. Rooney, clk., road imprvs. **WPA. $55,256.**

Mont., Hardin—Big Horn Co., H. E. Cox, clk., road imprvs. **WPA. $62,412.**

†N. J., Clark—Federal Works Agency, 7 and D Sts., S.W. Wash., D. C., bituminous penetration macadam on macadam paving, 31,000 sq. yd. streets. **WPA. $70,680.** J. H. Weitzen, Smith and Hobart Sts., Perth Amboy, WPA and owner's engr.

†N. J., Clark—Federal Works Agency, 7 and D Sts., Wash., D. C., paving streets for defense housing project, **WPA. $55,000.** J. H. Weitzen, Smith and Hobart Sts., Perth Amboy, WPA and owner's engr.

N. J., Mt. Holly—Burlington Co., Courthouse, grading, etc., 3 mi. Chambers Corner-Mt. Holly Rd. **WPA. $62,666.** W. D. Cougle, 1102 S. Broad St., Trenton, WPA and owner's engr.

N. J., Newark—Grading, excavating, 3 in. bituminous concrete surfacing, **WPA. $72,500.** G. Andress, City Hall, city and WPA engr.

N. Y., Brooklyn—President Brooklyn Boro, Boro Hall, asphalt on macadam resurfacing, granite block, repaving, curbing, basins, inlets, malls, etc., **WPA. $350,810.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Long Island City—President Queens Boro, 120-55 Queens Blvd., Kew Gardens, asphalt topping existing roadways, **WPA. $232,695.** W. W. Johnston, 70 Columbus Ave., New York, dir Div. Operations.

N. Y., New York—President Bronx Boro, 851 Grand Concourse, widening resurfacing Eastern Blvd., **WPA. $170,046.** W. W. Johnston, 70 Columbus Ave., Dir. Div. Operations.

N. Y., St. George—President Richmond Boro, Boro Hall, grading, 5 in. rein.-con. paving, curbs, sidewalks, **WPA. $270,742.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

†N. C., Wilmington—Con. Q.M., Camp Davis, grading, sand asphalt paving 0.918 mi., to Brown Paving Co., 145 Brevard Court, Charlotte, **$30,404.** CD 5/28—ENR 5/26.

†N. C., Wilmington—Con. Q.M., Camp Davis, sand asphalt paving 460,000 sq. yd., to F. N. Thompson, 145 Brevard Court, Charlotte, **$30,464.**

N. Y., Utica—Dpt. P. Wks., City Hall, paving additional streets after trolley rail removal. **WPA. $190,000.** W. P. Shaw, city engr.

Okla., Jones—Oklahoma Co., grading, paving, 2 mi. Spencer Jones Co. Hy., **WPA. $35,967.** C. W. McFerron, Court House, Oklahoma City, engr.

Okla., Oklahoma City—Oklahoma Co., grading, paving, 1.8 West End Ave. Rd. from west west 39 St. to Bluff Creek reservoir, **WPA. $53,600.** C. W. McFerron, Courthouse, engr.

★**Pennsylvania**—State Hy. Dpt., Harrisburg, imprv. 27,023 ft. Somerset and Westmoreland Counties, to Adam Eidemiller, Greensburg, **$529,365.** Bids 6/20. CD 6/24—ENR 6/26.

Tennessee — State Hy. Comm., Nashville, imprv. 1.138 mi. Roane Co., to Allied Constr. Co., Nashville, **$89,842****1.497 mi. Shelby Co., to J. B. Michael & Co., 1021 Haywood St., Memphis, **$296,645.** CD 7/1, under LB.

Tex., Borger—B. Andress, mayor, imprv. streets, alleys, curbing, guttering, walks, driveways. **WPA. $102,000.** L. M. Davis, city engr.

Tex., Centerville—Leon Co., R. E. Burroughs, judge, imprv. highway between Centerville and Trinity River bridge, **WPA. $78,300.**

★**Tex., Corpus Christi**—Nueces Co., c/o A. C. Gandy, judge, road connections, resurfacing, maintenance work throughout county, to Brown & Root, Inc., Old Federal Bldg. **$781,508.** Est. $1,500,000.

Tex., Dallas—Dallas Co., G. Harwood, judge, asphalt surfacing 21 mi. road Precinct 1. **WPA. $68,400.** R. H. Clinger, co. engr.

Tex., Dublin—C. E. Leatherwood, mayor, street imprvs., paving. **WPA. $50,000.**

Tex., El Campo—J. S. Carroll, mayor, imprv. streets. **WPA. $50,000.**

Tex., Goose Creek—J. H. Meek, mayor, paving streets, curbing, guttering, sidewalks, throughout city. **WPA. $51,900.** J. W. Harkins, city engr.

Tex., Houston—Houston Housing Auth., Stewart Bldg., paving, curbing, guttering, walks, storm sewers, Kelly Courts. **WPA. $63,900.**

Tex., McKinney—Collin Co., J. E. Abernathy, judge, reconstructing, imprv. road from Honey Grove to Chambersville. **WPA. $59,000.**

Tex., Rusk—Cherokee Co., H. T. Brown, judge, imprv. 16¼ mi. road between Rocklaw and Trawick. **WPA. $302,000.** R. R. Renshaw, engr.

Tex., Tyler—G. D. Fairtrace, city mgr., imprv. streets. **WPA. $58,000.** J. P. Ferrell, engr.

Utah—State Road Comm., Salt Lake City., imprv. 15.322 mi. Sevier and Emery Counties, to J. M. Sumsion, Springville. **$41,788.** Est. $47,748. Bids 7/1. CD 6/25.

Utah—State Road Comm., Salt Lake City, imprv. 3.759 mi. Emery Co., to A. O. Thorn Constr. Co., Springville, **$125,355, est. $115,752;** 3.422 mi. Box Elder and Cache Counties, to Wheeler & England Constr. Co., Moreland, Idaho, **$187,594,** est. $170,500. CD 6/13 and 6/19.

†Utah, Ogden—Con. Q.M., Ogden, 2 mi. rein.-con. and asphalt paving roads, around 37mm shell loading plant, Ogden Ordnance Depot, to Ora Bundy, 226 Kiessel Bldg., **$100,383.** CD 6/17—ENR 6/19.

†Utah, Ogden—Constr. Q.M., Ogden Ordnance Depot, concrete roads, black top warehouse aprons and concrete ramp at 40 warehouse unit, Ogden Ordnance Depot, to Strong & Grant, Springville. **$233,367.** Bids 6/27.

Vermont—State Hy. Dpt., H. E. Sargent, ch. engr., Montpelier, imprv. 2.781 mi. hy. Montpelier, Berlin and Barre, to Lane Constr. Co., 35 Colony St., Meriden, Conn., **$212,340;** 1.202 mi. Manchester, to Troy Paving Co., Hudson Falls, N. Y., **$47,386.** Bids 6/20. CD 6/10—ENR 6/12.

†Vt., Fort Ethan Allen—Con. Q.M., constructing roads, drainage work, incl. grading, Q.M. 6671-41-14, to Warren Bros. Roads Co., 38 Memorial Dr., Cambridge, Mass. **$89,877.** CD 6/3.

West Virginia—State Road Comm., Charleston, imprv. Susanna-Bradshaw Rd., McDowell Co., to Mirabile Constr. Co., Welch, **$41,965;** Project 206 B, 3299 and 3350, Putnam Co., to Murphy Constr. Co., Morgantown. **$262,621.** CD 6/19—ENR 6/26.

Wis., Milwaukee — Paving West Clybourn St., to White Consolidated, Inc., 2543 W. Greves St. **$109,746.**

EARTHWORK, WATERWAYS

PROPOSED WORK

†Calif., Stockton—U. S. Eng., 208 Postoffice Bldg., Sacramento, specifications completed dredging, depositing 329,200 cu. yd. material from San Joaquin River Deep Water Channel.

†Conn., East Hartford—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., pump. station, Meadow Hill. $50,000.

★**Illinois**—State Dpt. P. Wks. & Bldgs. Div. Waterways, 30 lakes damming small rivers and streams, spillways, in Pinckneyville and Charleston and other central and southern Illinois regions. $2,000,000. C. Jenkins, Monroe and Spring Sts., Springfield, ch. engr.

N. J., East Orange—Imprv. Second River, excavating, retaining walls, etc. $35,000. WPA. W. Willegarod, Town Hall, town and WPA engr.

S. D., Brandon—Minnehaha Co., revised plans dam on Split Rock Creek, drawdown and control gate, concrete spillway, various recreational facilities. $236,471. Application made to WPA. CD 1/8—ENR 1/16.

Tex., Dallas—Mrs. T. E. Lupton, c/o Engineers, Dallas, completed plans earthen dam. $25,000. Koch & Fowler, Great Natl. Life Bldg., engrs.

†Tex., Fort Worth—U. S. Eng., Citizens Bank Bldg., Denison, bids soon 1,600,000 cu.yd. grading work, Bomber Assembling Plant. $140,000.

Tex., San Benito—International Boundary Comm., Farmers Bank Bldg., San Benito, flood control, ditching, embankments, drainage. $300,000.

†Wash., Everett—U. S. Eng., Central Bldg., Seattle, maintenance dredging harbor. $16,000.

Ont., Port Arthur—P. A. Shipbuilding Co. Ltd., Port Arthur, sheet pile revetment in front of Location Number 6, $40,000. C. D. Howe, Ltd., Public Utilities Bldg., engr.

BIDS ASKED

Bids Asked July 15

†Wash., Vancouver—Bonneville Power Administration, P. O. Box 3537, Portland, Ore., furnishing four 105 cu. ft. and four 210 cu. ft. portable, 2 stage air compressor, Inv. 2065.

†Tenn., Knoxville—Tennessee Valley Auth., Knoxville, furnishing, installing, built-up roofing and flashing for fan room roof, Wilson Powerhouse, Units 1-8.

†Wash., Odair—Bureau Reclamation, Denver, Colo., eight 460 volt, ZHL1 to ZHL8, one 460 volt ZHL9, nine 460 volt ZL1 to ZL9 heating power boards for Grand Coulee Power Plant, Inv. C-38, 461-A.

Bids Asked July 22

†North Carolina—U. S. Eng., Wilmington, dredging 270,000 cu. yd. material from channel from Manteo to Oregon Inlet, N. C. (Manteo (Shallowberg) Bay, N. C.); adv. ENR 7/10.

Bids Asked July 23

La., Alexandria—At office Bd. Comrs. Red River, Atchafalaya and Bou Bouef Levee Dist., Commercial Bank Bldg., Alexandria, enlarging drainage canal, 4800 ft. easterly, beginning Lee St., for Dpt. P. Wks., Capitol Bldg., Baton Rouge.

Bids Asked July 24

†Arizona-California-Nevada — Bureau Reclamation, Denver, Colo., furnishing, del. 1 transformer neutral grounding reactor suitable for 50- or 60-cycle operation, complete with manually operated, single pole, single throw, disconnecting switch for Unit A-5, in Boulder power plant, Boulder Canyon Project, Spec. 1528-D.

Bids Asked July 25

†Idaho—Bureau Reclamation, Denver, Colo., furnishing, del. materials for 1 steel warehouse at Anderson Ranch Dam, Boise Project, Spec. 1530-D.

Bids Asked July 28

†Arizona-California — Bureau Reclamation, Denver, Colo., furnishing, del. pipe, fittings, valves, and cocks for Parker Power Plant, Parker Dam Power Project, Spec. 1529-D.

†Idaho—Bureau Reclamation, Boise, earthwork, structures, track, telegraph line for relocation Idaho Northern branch Oregon Short Line R.R. (Union Pacific R.R. Co., lessee) from Cascade to Donnelly, for Cascade Reservoir, Payette Div., Boise Project, Spec. 974; adv. ENR 7/10.

Bids Asked July 31

†Illinois—U. S. Eng., 932 U. S. Post Office Bldg., Chicago, reconstructing upper approach wall, Dresden Island Lock, Illinois Waterway; adv. ENR 7/10.

Bids Asked August 18

†California—Bureau Reclamation, Customhouse, Denver, Colo., furnishing, del., main and station-service control equip., load and frequency control equip., switchboards, battery chargers, switchgear for installation in Shasta Power Plant, Central Valley Project, Spec. 972.

LOW BIDDERS

†Illinois—U. S. Eng., 816 U. S. Courthouse and Customhouse, St. Louis, Mo., June 25, rebuilding and enlarging levees in East Side Levee and Sanitary Dist., from E. E. Morgan Co., Inc., P. O. Box 78, Jackson, Miss. **$174,767.** CD 6/12—ENR 6/19.

†Va., Pig Point—U. S. Eng., Ft. Monroe, June 18, railway pier and breakwater in Nansemond River, from Eure Bros., Beaufort, N. C., **$112,388.** CD 5/26—ENR 5/29.

CONTRACTS AWARDED

★**†Colorado**—Bureau Reclamation, Denver, Colo. excavation, 8,000 ft. section, constructing 14,200 ft. concrete invert on west end, Continental Divide Tunnel on Colorado Big Thompson Project, to Stiers Bros. Constr. Co., 2944 Magazine St., St. Louis, Mo. **$832,906.** Bids 6/5. CD 6/9—ENR 6/12, under LB.

★**†Mississippi** — U. S. Eng., P. O. Box 60, Vicksburg, 11 mi. excav. Arkabutla Dam, Tate and Desoto counties, to Friend-Volz Constr. Co., Jackson, **$694,387.** Est. $700,000. Awarded 6/30.

†Mississippi—U. S. Eng., P. O. Box 60, Vicksburg, channel imprvs. on Coldwater River, Tunica and Tate Counties, approx. 1,020,000 cu. yd. excav., Item 354, to S. W. Hardwick Co., Beardstown, Ill., **$91,188** *** 940,000 cu. yd., Item 345, to Clarke Bros. Constr. Co., Langan Bldg., Clinton, Ia., **$76,986** ***1,105,000 cu. yd. Item 340, to McWilliams Dredging Co., 180 N. Michigan Ave., Chicago, Ill., **$99,450.** Grand total $267,624. CD 6/3—ENR 6/5.

†Mississippi—U. S. Eng., P. O. Box 60, Vicksburg, approx. 700,000 cu. yd. earthwork on east bank Mississippi River, to J. W. Hendrix, P. O. Box 773, Shreveport, La. **$104,020.** Bids 6/18. CD 6/4—ENR 6/12.

Mo., New Madrid—Drainage Dist. 40, New Madrid Co., c/o F. M. Robbins, dist. engr., excavating Ditches 1 and 2, about 26 mi., to S. J. Cohen Co., Blytheville, Ark. **$21,168.** Bids 6/24.

Mo., Odessa—Embankment for earth dam, to Geo. W. Condon Co., Grain Exch. Bldg., Omaha, Neb., approx. **$40,000.** Bids 6/16. M. B. Layne, Higginsville, engr.

Mont., Butte—Silver Bow Co., A. A. McGrath, clk., flood control on Silver Bow Creek. **WPA. $56,948.**

Neb., Ashland—Lancaster Co. Sanitary Dist., Lincoln, dragline excav. for widening channel Salt Creek, Saunders Co., to Jack Boyne Constr. Co., 14 Bryant St., Council Bluffs, Ia. **$28,130.** Bids 6/27. CD 6/19.

†Neb., Florence—U. S. Eng., 1709 Jackson St., Omaha, excav. 66,500 yd. rock and 82,200 yd. earth from Missouri River and Florence bend, hired labor and Government Plant. Est. **$200,000.**

†Neb., Nebraska City—U. S. Eng., 1709 Jackson St., Omaha, dredging 850,000 cu.yd. earth from Missouri River at Barney Bend, hired labor and Govt. plant. **$50,000.** CD 4/23—ENR 5/8.

†Pa., Pittsburgh—U. S. Eng., 925 New Federal Bldg., dredging Grane Greek Bar, Ohio River, to Dravo Corp., Neville Island, Pittsburgh. **$27,770.** CD 5/13—ENR 5/15. Bids 5/20.

EARTHWORK, etc. (Contracts Awarded, Cont'd.)

†**S. C., Charleston**—War Dpt., 20 St. and Constitution Ave., Wash., D. C., dredging shipyard river channel to 20 ft., to Merritt Dredging Co., 63 Rutledge Ave., **$18,070.** Est. $25,689.

†**Texas**—U. S. Eng., Post Office Bldg., Galveston, repairing seaward end of north jetty, Port Arkansas-Corpus Christi Waterway, to J. De Puy & Sons, 102 W. Lynwood Ave., San Antonio. **$288,060.** CD 4/3—ENR 4/10.

UNCLASSIFIED

PROPOSED WORK

Ark., Little Rock—TELEPHONE LINES, etc.—Southwestern Bell Telephone Co., 715 Louisiana Ave., expansion telephone facilities, new lines, poles, etc. $100,000-$200,000.

California—WHARF—A. Boyd, state archt., P. Wks. Bldg., Sacramento, received no bids July 1, timber wharf, T-shaped, Morrow Cove, for Calif. Maritime Academy, Morrow Cove. CD 6/16—ENR 6/19.

★†**Calif., Merced**—FLYING SCHOOL—U. S. Eng., 208 Postoffice Bldg., Sacramento, Army Air Corps Flying School with complete quarters for enlisted men, cadets and officers. $4,000,000.

★†**Calif., Santa Ana**—FLYING SCHOOL IMPROVEMENTS—U. S. Eng., 731 S. Figueroa St., Los Angeles, ground work aviation school, Newport Rd. $2,500,000.

★†**Fla., Jacksonville**—HEALTH and SANITARY FACILITIES—Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., additional health and sanitary facilities in Naval Air Station. $1,215,000.

★†**Fla., Starke**—SANITARY FACILITIES—Con. Q.M., Camp Blanding, additional sanitary and health facilities, Camp Blanding. $1,655,000.

Ky., Glendale — STEAM DISTRIBUTION SYSTEM—Commonwealth of Kentucky Eng. & Constr. Div., Frankfort, completing plans reconstructing underground steam distr. sys. to Greendale Reformatory. R. C. Wyatt, Frankfort, ch. engr.

★†**Miss., Columbus**—FLYING SCHOOL—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., advanced twin flying school, 48 barracks, officers club, 11 supply rooms, 5 officers quarters, hospital, repair shop, commissary, incinerator, hangars, chapels, guard house, post exchange, recreation buildings, etc. $4,123,943.

★†**N. Y., Rome**—AIR DEPOT—U. S. Eng., Security Bldg., Binghamton, air depot. $15,000,000. Air Depot Engineers, Inc., 25 West 45 St., New York City, engrs. and archts. CD 5/19—ENR 5/22.

Pa., Erie—SHIPBUILDING PLANT—Erie Concrete & Steel Supply Co., Inc., 1301 Cranberry St., 1 story, steel, concrete shipbuilding plant, foot of Cascade St. Over $40,000.

S. D., Brandon — DAM — Minnehaha Co., revised plans dam on Split Rock Creek, drawdown and control gate, concrete spillway, various recreational facilities. $236,471. Application made to WPA. CD 1/8—ENR 1/16.

Tex., Beeville—AIRPORT—U. S. Eng., Santa Fe Bldg., Galveston, surveys airport, three 5,000 ft. runways, hangars, shop, field development, etc. CAA. $225,000.

Tex., Corpus Christi—HANGAR—A. C. McCaughan, mayor, steel hangar, municipal airport. $50,000. G. Blackburn, city engr.

★†**Tex., Edinburg**—FIELD DEVELOPMENT, etc.—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., buildings, field development, A. C. gunnery school, barracks, supply buildings, etc. $2,800,000.

★**Tex., Houston**—AIRPORT—Municipal airport expansion and imprvs., new and exten. to runways and paving, same, etc. $500,000 WPA and CAA. CD 6/19—ENR 6/26.

Tex., Kerrville—AIRPORT—U. S. Eng., Santa Fe Bldg., Galveston, topographical surveys airport, administration building, shop, hangars, two 4,000 ft. runways, utilities, field development. $200,000. CAA.

Tex., Mission — AIR CORP TRAINING SCHOOL — J. Riddle, Mission, private A. C. training school, barracks, hangars, school building, mess hall. $100,000.

Tex., Natchitotches — ELECTRIC DISTRIBUTING SYSTEM, etc.—Exten. existing electric distr. sys. and power plant. Freese & Nichols, Capps Bldg., Fort Worth, engrs. $70,000.

†**Wash., Bremerton** — TUNNEL — Puget Sound Navy Yard, received no bids June 18, tunnel for Drydock 3, Spec. 10481. Will readvertise. CD 6/10.

★**Wash., Seattle** — PIERS, etc. — Port of Seattle, Bell St., two 400x1000 ft. piers, 1 story transit sheds, Elliott Bay, foot Connecticut St. $2,000,000.

Wash., Vancouver — PARK IMPROVEMENTS—Clark Co., Court House, clearing, grubbing, excav., drainage, sewage facilities, incinerator, shelters, etc. at Lewisville Park. $93,896. Seeking WPA funds. C. Deako, Court House, engr.

W. Va., Charleston—AIRPORT—Owner, c/o A. Wessel, divisional engr. for CAA, airport on Coonskin Ridge, near here. Over $100,000.

†**Alaska, Unalaska** — LANDING FIELD — Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., emergency landing field, Naval Air Station. $145,000.

†**Alaska, Unalaska**—SEAPLANE RAMPS—Yards & Docks, Navy Dpt., Wash., D. C., seaplane ramps, Naval Air Station. $80,000.

Alaska, Unalaska—SEAPLANE PARKING AREA—Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., seaplane parking area, Naval Air Station. $60,000.

BIDS ASKED

Bids Asked July 14

N. Y., New York—DUMPING BOARD—At office President Manhattan Boro, Municipal Bldg., completion Contr. No. 9C, general construction sanitation dumping board, E. 60 St., East River Dr., imprv. E. 49 St. to E. 99 St. W. D. Binger, comr. Boro Works.

Bids Asked July 15

N. Y., Brooklyn—RECONSTRUCTING CAR TRACKS—Bd. Transportation, 250 Hudson St., New York, reconstructing surface car tracks, etc., drainage equip. for Line A, Fulton St. CD 6/30—ENR 7/3.

Bids Asked July 16

†**D. C., Wash.**—DRYDOCK CAPSTANS—Yards & Docks, Navy Dpt., 109 electrically operated capstans for dry docks, Portsmouth, N. H., New York (Brooklyn) N. Y., Philia., Pa., Norfolk (Portsmouth), Va., and Charleston, S. C., Navy Yards, Spec. 10477; adv. ENR 7/10.

Bids Asked July 17

Arkansas — RURAL LINES — South Central Arkansas Electric Co-operative, Arkadelphia, 104 mi. transmission lines. Midwestern Eng. & Constr. Co., McBirney Bldg., Tulsa, Okla., engrs.

Bids Asked July 22

Arkansas—RURAL LINES—Carroll Electric Co-operative, Berryville, 251.79 mi. transmission lines. Midwestern Eng. & Constr. Co., McBirney Bldg., Tulsa, Okla., engrs.

Bids Asked August 7

Ill., Chicago—STATION FINISH—P. Harrington, comr. Subways & Superhighways, 20 N. Wacker Dr., Chicago, station finish F-1, F-2, and F-3, State St. Subway; adv. ENR 7/10. CD 4/22—ENR 4/24.

LOW BIDDERS

†**Ala., Selma** — RUNWAY PAVING — U. S. Eng., Mobile, grading, paving runways, taxiways, parking apron, Advanced Flying School, from C. C. Moore Constr. Co., Panama City. **$438,380.** CD 5/23—ENR 5/29.

★†**Ariz., Higley**—AIRFIELD—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., June 28, 159 buildings, incl. barracks, recreational facilities, hangars, etc., army air base, from Del. E. Webb Constr. Co., 1633 W. Jefferson St., Phoenix, **$1,534,201.** CD 6/25.

†**Ariz., Mesa**—HANGARS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., 3 A. C. hangars, from Allison Mfg. Co., 19 Ave. and Railroad St., Phoenix, **$179,064.**

★†**Ariz., Phoenix** — AIRPORT IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., June 30, landing mat, airport, from Pierson & Dickerson Contractors, J. A. Casson Co. and Oswald Bros., 366 E. 58 St., Los Angeles, Calif., **$924,690.**

†**Calif., Bakersfield**—GASOLINE FUELING SYSTEM — U. S. Eng., 208 Postoffice Bldg., Sacramento, June 24, A.C. gasoline fueling sys., Flying Field 2, near here, Inv. 1105-41-268, from Central California Constr. Co., 115 Burrows St., San Francisco, **$97,185.** Est. $72,000. CD 6/20.

†**Calif., Campo** — RAILROAD SPUR — Con. Q. M., June 27, 0.4 mi. railroad spur, Camp Lockett, from A. D. Schader, 144 Spear St., San Francisco. **$29,379.**

†**Calif., Fresno**—GASOLINE FUELING SYSTEM—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 25, A.C. gasoline fueling sys. Fresno Air Base, near here, Inv. 1105-41-270, from P. Gadd, 3423 Dahlia Dr., Los Angeles. **$129,385.** Est. $106,000.

†**Calif., Hamilton Field**—GASOLINE FUELING SYSTEM—Con. Q. M., Fort Mason, June 27, A. C. gasoline fueling sys., revisions, addns., Inv. W. 6616-41-179, from Flotation Systems, 4031 Goodwin Ave., Los Angeles, **$80,464.** CD 6/23.

★†**Calif., Lemoore**—FLYING SCHOOL—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, temporary housing for A. C. Flying School, from Louis Franceschi Constr. Co., 465 Avila St., San Francisco. **$1,849,949.** Est. $1,112,077. CD 6/24.

†**Calif., Lemoore**—HANGARS, etc.—U. S. Engr., 208 Postoffice Bldg., Sacramento, June 27, 3 A.C. hangars, control tower, etc., Inv. 1105-41-301, from Trewhitt, Shield & Fisher, Pacific Southwest Bldg., Fresno, **$215,000.** Est. $146,000.

★†**Calif., Lemoore**—LANDING STRIP, etc.—U. S. Eng., 208 Postoffice Bldg., Sacramento, landing strip, runway, taxiway and warmup aprons, airport, from Pacific Rock & Gravel Co., 208 W. 5 St., Los Angeles, **$694,843.** Est. $565,862. CD 6/25.

Calif., Lemoore — SWIMMING POOL — Lemoore Union High School Dist., June 24, reinf. concr. swimming pool, from Paddock Eng. Co., P. O. Box 247, San Mateo, **$64,889.** CD 6/13—ENR 5/29.

†**Calif., Mather Field**—GASOLINE FUELING SYSTEM—U. S. Eng., 208 Post Office Bldg., Sacramento, June 25, A. C. gasoline fueling sys., Inv. 1105-41-267, from P. Gadd, 3423 Dahlia Dr., Los Angeles, **$99,900.** Est. $78,000. CD 6/20.

★†**Calif., Merced**—FLYING SCHOOL—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, temporary buildings, from W. W. Petley, 146 S. LaBrea Ave., Los Angeles. **$1,459,683.** CD 6/24.

★†**Calif., Merced** — LANDING STRIP, etc.—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, landing strip, runway, taxiway and warmup aprons from Union Paving Co., 310 California St., San Francisco. $519,272. Est. $580,676. CD 6/25.

†**Calif., Merced** — HANGARS — U. S. Eng., 208 Post Office Bldg., Sacramento, June 27, 2 A. C. hangars, control tower, Inv. 1105-41-300, from Trewhitt, Shields & Fisher, Pacific Southwest Bldg., Fresno, **$218,900.** Est. $146,000. CD 6/24.

†**Calif., Moffett Field**—RUNWAYS, etc.—U. S. Eng., 401 Customhouse, San Francisco, June 26, runway and general paving at Moffett Field, Inv. 868-41-232, from M. S. Hanrahan, P. O. Box 429, Redwood City, **$439,468.** Est. $482,221. CD 6/20.

Calif., Salinas—APRON, etc.—U. S. Eng., 401 Customhouse, San Francisco, Calif., June 27, apron, taxiways, roads and fences, Salinas Airport, from Wilkinson & Scott, Box 900, Watsonville. **$147,997.** Est. $98,713.

★†**Calif., Stockton**—FLYING SCHOOL—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, temporary housing, Flying School, from T. C. Buck, 250 E. Cleveland St. **$790-901.** Est. $538,257.

†**Calif., Taft**—GASOLINE FUELING SYSTEM—U. S. Eng., 208 Post Office Bldg., Sacramento, June 25, A. C. gasoline fueling sys., Taft Field, Inv. 1105-41-269, from Aqua Systems, Inc., 385 Gerard Ave., New York, N. Y., **$90,325.** Est. $71,000.

†**Calif., Taft**—HANGARS—U. S. Eng., 208 Post Office Bldg., Sacramento, June 27, three A. C. Hangars, control tower, etc., Taft Field near here, Inv. 1105-41-279, from Trewhitt, Shield & Fisher, Pacific Southwest Bldg., Fresno, **$215,000.** Est. $146,000. CD 6/25.

†**Calif., Victorville**—HANGARS—U. S. Eng., 751 S. Figueroa St., Los Angeles, 4 A. C. hangars, Victorville, Military Post and 6 west of Victorville, from Bakker & Robinson, 190½ E St., San Bernardino, **$242,740.**

Ga., Marietta—LANDING STRIPS, etc.—U. S. Eng., Mobile, Ala., June 26, landing strips, taxi strips, paving runway, drainage sys., Cobb Co. Airport, 3½ mi. southeast of here, from W. L. Florence, Powder Springs. **$287,983.**

†**Ill., Scott Field** — GASOLINE FUELING SYSTEM—U. S. Eng., 816 Court House and Custom House, St. Louis, Mo., June 26, enlarging existing A. C. gasoline fueling sys. airfield, Inv. 1103-41-236, from Aqua Systems, Inc., 385 Gerard Ave., New York, N. Y. **$28,473.** Est. $17,800.

†**Ill., Scott Field**—RUNWAYS—U. S. Eng., 816 U. S. Courthouse and Customhouse, St. Louis, Mo., June 25, concrete airport runways, at U. S. Fairfield, from George Welch, Sherman Hotel, Chicago. **$464,483.**

†**Md., Annapolis**—VAULTS—Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., June 25, two vaults, Naval Academy, from Tilghman Moyer Co., 141 N. 9 St., Allentown, Pa. **$35,643.** Est. $40,000.

†**Mass., Chilmark**—BOATHOUSE, etc.—U. S. Coast Guard, Treas. Dpt., Wash., D. C., June 26, boathouse, launchway Gay Head Station, from Park Constr. Co., 14 Fernald Terrace, Dorchester. **$59,000.** CD 6/17—ENR 6/19.

Miss., Meridian—RUNWAYS—U. S. Eng., P. O. Box 60, Vicksburg, airplane runways, Key Field, from Wesco Constr. Co., Riverside Dr., Chattannooga, Tenn., **$441,500.**

Nev., Las Vegas—HANGAR—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., June 27, 160x200 ft. A. C. repair hangar, Las Vegas Military Airport, from C. J. Dorfman, 124 N. LaBrea Ave., Los Angeles, Calif. **$139,880.** CD 6/13.

†**N. J., Fort Dix**—AIRPORT—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., airport and cantonment hospital addn.; from Foundation, Inc., 61 E. Main St. Moorestown. **$41,442.**

†**N. J., Fort Dix**—GASOLINE STORAGE FACILITIES—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., gasoline storage facilities for Q.M. Dpt., from C. W. Arnold, 737 Trembel Ave., Trenton, **$78,977.**

†**N. J., Fort Dix**—RECREATIONAL FACILITIES—War Dpt., 20 St. & Constitution Ave. N.W., Wash., D. C., recreational facilities for 372nd Infantry, from O'Driscoll & Grove, Inc., 247 Park Ave., New York, N. Y. **$110,000.**

N. Y., New York—RAILROAD STATION—Bd. Transportation, 250 Hudson St., June 27, superstructures for Broadway East New York station, Route 110 Sect. 6 A and 6 B, from Meads Eng. Co., Inc., 217 W. 14 St., **$178,000** (unofficial). CD 6/24.

UNCLASSIFIED (Low Bidders, Cont'd.)

N. Y., New York—TUNNEL WORK—At office General Manager Port of New York Auth., 111 8 Ave., July 1, Contr. MHT-57, Lincoln Tunnel North Tube, New York River ventilation building, from Thompson-Starrett Co., Inc., 444 Madison Ave., **$494,960.** CD 6/3—ENR 6/5.

†Tenn., Tullahoma—AIRFIELD—U. S. Eng., Courthouse, Nashville, June 28, construction Camp Forrest Air Field, from R. H. Wright & Son, Columbus, Ga., Sects. A & B. **$1,337,-961.** CD 6/12 CD 6/23.

†Tex., San Antonio—NAVIGATION TRAINING SCHOOL—U. S. Eng., Federal Bldg., Galveston, June 27, navigation (aviation) training school barracks, officers quarters, administration building, total 45 buildings, from C. L. Browning, Jr., c/o Builders Exch. Bldg., **$498,152.** Est. $490,000. CD 6/23 under Public Buildings.

†Washington—INSULATOR UNITS—Bonneville Power Administration, P. O. Box 3537, Portland, Ore., June 25, 50,000 insulator units for Bonneville transmission lines, Inv. 1987, from Corning Glass Wks., Corning, N. Y., **$80,000.**

†Washington—SUBSTATION TRANSFORMERS—Bonneville Power Administration, P. O. 3537, Portland, Ore., July 2, furnishing three 25,000 kva. substation transformers, Inv. 2043, from General Electric Co., 1 River Rd., Schenectady, N. Y. **$403,905.** CD 6/30.

Wash., Everett — GASOLINE FUELING SYSTEM—U. S. Eng., Central Bldg., Seattle, Air Corps gasoline fueling sys. Snohomish Co. Airport, near here, from Central California Constr. Co., 115 Burrows St., San Francisco, Calif., **$121,432.**

†Wash., Fort Lewis—RAILROAD TRACKS—Con. Q.M., June 27, railroad spur track, from A. J. Goerig, 1446 Ballard Way, Seattle. **$108,000.**

CONTRACTS AWARDED

★**†Ariz., Mesa**—AIRPORT IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., temporary buildings, airport, to Del E. Webb Constr. Co., 1633 W. Jefferson St., Phoenix, Ariz. **$1,534,201.**

★**†Ariz., Mesa**—APRONS, RUNWAYS—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., aprons, runways, for new airport, to Pierson & Dickerson Contractors, Tanner Constr. Co., J. A. Casson Co., Lemoor Co., Phoenix-Tempe Stone Co. and Oswald Bros., 366 E. 58 St., Los Angeles, Calif. **$1,878,061.** CD 7/1.

Ark., Conway—AIRPORT IMPROVEMENT—Imprv. airport. **WPA. $150,000.**

★**†Ark., Hope**—PROVING GROUND—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., proving ground, to W. E. Callahan Constr. Co., 2034 Moxley St., Dallas, Tex. **$7,056,933.** Awarded 6/26. CD 6/24.

★**†Calif., Muroc**—APRONS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, aprons, runways at Bombing Range, to Peter L. Ferry & Son, Haines Canyon Material Co., Sander Pearson and E. P. Ferry, 308 East Lomita St., Glendale. **$1,300,403.** Bids 6/30. CD 7/1, under California.

★**†Calif., Riverside**—RUNWAYS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, runways, aprons, taxiway, etc., March Field, to Matich Bros., Elsinore, and E. L. Yeager, Riverside. **$982,220.** Bids 6/24, awarded 6/30. CD 6/26—ENR 7/3.

★**†Calif., Victorville**—AIRPORT IMPROVEMENTS—U. S. Eng., 751 S. Figueroa St., Los Angeles, temporary buildings, Military Airport, to Ford J. Twaits Co., 816 W. 5 St., Los Angeles. **$2,126,100.** CD 7/1.

★**†Calif., Victorville**—APRONS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, aprons, etc., airport, to Bressi-Bevandi Constructors, 208 W. 8 St., Los Angeles. **$1,317,-245.** CD 7/1.

†Colo., Denver—RUNWAY PAVING—U. S. Eng., 1709 Jackson St., Omaha, Neb., 15,080 ft. curb and gutter, 8.080 ft. concrete walks, 48,000 sq. yd. concrete paving, 4,850 sq. yd. asphalt surfacing, Lowry Field, to Peter Kiewit Sons Co. & J. B. Bertrand, 4295 York St. **$188,524.** Bids 6/27, awarded 6/30. CD 6/25.

★**†Colo., Denver**—RUNWAY PAVING—U. S. Eng., 1709 Jackson St., Omaha, Neb., paving runways, drains, Lowry Field, to Peter Kiewit Sons Co. J. B. Bertrand, Inc., 4295 York St. **$722,870.** Est. $669,034. CD 6/23.

Colo., Steamboat Springs—GAS PIPELINE—Mountain Fuel Supply Co., F. B. Firmin, secy., 36 S. State St., Salt Lake City, Utah, 18 mi. gas pipeline, to T. Jenks, Casper, Wyo. Est. **$25,000.**

Conn., Stratford—AIRPORT—City of Bridgeport, P. Brewster, dir. P. Wks., Bridgeport, airport, Lordship, incl. lengthening Runway 2 to 3,500 ft., excav., drainage, etc., to Pascone Brothers, Inc., 73 Steuben St., Bridgeport, **$35,000.**

Fla., Jacksonville—AIRPORT—2 additional buildings, municipal airport exten. for recreational facilities for members of 4th Army Corps Observation units, to C. G. Smith, Hazelhurst, Ga. **$25,000-$45,000.** Awarded 6/26.

★**†Fla., Panama City**—AIR FIELD and CANTONMENT—U. S. Eng., Federal Bldg., Mobile, Ala., air field and cantonment, Flexible Gunnery School, to C. C. Moore Constr. Co., Panama City, and Paul H. Smith Constr. Co., Spruce and N. Delaware Ave., Tampa. **$2,950,577.**

†Fla., Tampa—UNDERGROUND MAGAZINES—U. S. Eng., Box 4970, Jacksonville, underground ordnance and munitions storage and munitions magazines, to Paul H. Smith Constr. Co., Spruce St. and N. Delaware Ave. **$236,641.** Awarded 6/26.

★**†Ga., Conley**—GRADING, RAILROADS, etc.—Con. Q.M., 101 Marietta St. Bldg., Atlanta, grading, railroads, new classification yards, to E. M. Beckham, Perry. **$642,196.**

†Ga., Macon—HANGARS—Con. Q.M., 3 hangars, Basic Flying School, from Enjay Constr. & Eng. Co., 160 N. LaSalle St., Chicago, Ill., **$208,000.**

★**†Ga., Wellston**—AIR DEPOT—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., A.C. repair depot, to Mlcn Constr. Co., Inc., Bona Allen Bldg., W. C. Shepherd Constr. Co., 545 Piedmont Ave. N.E., and Griffin Constr. Co., Inc., 452 Spring St. N.W., all Atlanta. **$15,000,000.** CD 6/18—ENR 6/26.

†Ind., Fort Wayne—FUELING SYSTEM—U. S. Eng. Office, 605 Federal Bldg., Detroit, Mich., gasoline fueling sys. at airport, to Aqua Systems, Inc., 385 Gerard Ave., New York, N. Y. **$74,717.** Bids 6/2. CD 5/28.

Kan., Hays—AIRPORT—E. Johnson, city clk., airport enlargement, grading, drainage, runways, lightings. **WPA. $203,643.** A. A. Register, Salina, dist. engr.

★**†Kan., Kansas City**—AIRPORT—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., grading, runways, drainage, placing concrete runways for Fairfax Airport, to J. A. Tobin Constr. Co., 3700 Rainbow Blvd., Kansas City, Kan. **$1,687,021.** Est. $2,053,150. CD 7/2.

★**†La., New Orleans** — PIERS, etc. — War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., piers, wharves, army's port of embarkation, Poland Ave., to Stevens Bros. and The Miller-Hutchinson Co., 730 Gravier St., **$1,259,950.** Gardner & Howe, Porter Bldg., engrs. and archts.

†Mass., Bedford — AIRPORT — U. S. Eng., Park Square Bldg., Boston, 3 landing strips, 4,000 ft. long, 500 ft. wide, to M. De Matteo, 71 Blue Hills Pkway., Milton, **$300,909;** paving N.E./S.W. strip to width of 150 ft., to Warren Bros. Roads Co., 38 Memorial Dr., Cambridge, **$53,600.**

†Mass., Falmouth — SHEDS — Con. Q.M., Camp Edwards, sheds to house motor vehicles, electric utilities, to Leslie R. Porter Co., 126 Park St., Beverly. **$85,989.** Bids 6/30.

★**†Miss., Columbus** — TRAINING SCHOOL — U. S. Eng., 1 and Douglas Sts., N. W., Wash., D. C., 148 buildings, air base training school, about 7½ mi. north of here, to B. S. Williams Constr. Co., New Orleans, La., Est. **$2,000,000.** Awarded 6/30. CD 6/30—ENR 7/3.

★**†Miss., Greenville** — FLYING SCHOOL — U. S. Eng., 1 and Douglas Sts., N. W., Wash., D. C., A. C. Basic Flying School, 200 buildings, about 4½ mi. north of here, to M. T. Reed Constr. Co., Jackson and Belzoni. Est. **$2,000,000.** Awarded 6/30. CD 7/3.

Mont., Butte—AIRPORT—Beryl Wilson, city clk., airport imprvs., exten. **WPA. $129,826.**

Mont., Helena—AIRPORT—V. N. Kessler, city clk., airport imprvs., **WPA. $137,948.**

★**†Nev., Las Vegas**—APRONS, etc.—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., aprons, runways, etc., airport, to Gibbons & Reed Co., 259 West 3 St., Salt Lake City, Utah. **$521,110.** Bids 6/26, awarded 7/3. CD 6/27—ENR 7/3.

†N. H., West Lebanon—AIRPORT—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., paving runways, taxi strips, parking area, airport, Inv. 699-41-295, to M. De Matteo Constr. Co., 55 Stella Rd., Roslindale, Mass. **$105,863.** Bids 6/23. CD 6/26—ENR 7/3, under LB.

†N. J., Raritan and **Woodbridge**—STEAM DISTRIBUTION SYSTEM—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., steam distr. sys. and pump return sys., Raritan Arsenal, to George Stewart, Inc., 270 S. 20 St., Newark. **$127,400.** CD 4/29—ENR 5/1.

N. Y., Brighton (sta. Rochester) — SUBWAY—City Council, Rochester, exten. subway from Rowlands Sta., Brighton, to Monroe Ave., Rochester. **WPA. $57,000.**

★**N. Y., Glendale**—RECREATONAL AREA, etc.—Park Dpt., Arsenal Bldg., Central Park, 64 St. and 5 Ave., New York, recreational area, comfort station, raising existing fence, Juniper Valley Park and Grover Cleveland Park. **WPA. $549,083.** W. W. Johnston, 70 Columbus Ave., New York, dir. Div. Operations.

N. Y., Jamestown—LIGHTING—Bd. P. Utilities, City Hall, T. V. McKee, secy., street lighting sys. 6 streets, own forces. Over **$25,000.** CD 6/30—ENR 7/3.

N. Y., New York—PARK IMPROVEMENTS—Park Dpt., Arsenal Bldg., Central Park, 64 St. and 5 Ave., imprv. John Jay Park. **WPA. $256,043.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York—PLAYGROUNDS—Park Dpt., Arsenal Bldg., Central Park, 64 St. and 5 Ave., 4 playgrounds in Washington Square, 1 at 76 Oliver St. and 1 at 9 Rutgers Pl. **WPA. $87,273.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

N. Y., New York—PLAYGROUND—Park Dpt., Arsenal Bldg., Central Park, 64 St. and 5 Ave., playground and comfort station. **WPA. $259,228.** W. W. Johnston, 70 Columbus Ave., dir. Div. Operations.

Pa., Clarendon — OIL DEVELOPMENT — A. L. Shaner Co., Albert L. Shaner, genl. mgr., Bolivar, N. Y., developing crude oil property, drilling 17 wells from 1,050 to 1,450 ft. deep, pressure plant to force recovery of crude from wells, water flooding sys. etc., near here, own forces and separate contracts. **$45,000-$50,000.** CD 6/11—ENR 6/26.

Pa., Glenshaw—MAUSOLEUM—Mausoleum Constr. Co., Mt. Royal Cemetery, Mt. Royal Blvd., 1,000 crypt stone and marble, bronze mausoleum, separate contracts. **$75,000.**

Pa., Johnsonburg — LAGOON — Castanea Paper Co., Johnsonburg, 50 million gal. lagoon on 20 acre site, 10,000 ft. south of pulp and paper mill. Day labor and own forces. Over **$25,000.** CD 6/19—ENR 6/26.

Pa., Muse—COAL CLEANING PLANT—National Mining Co., subsidiary H. C. Frick Coal Co., S. J. Craighead, supt., Mine 3. 1 story, 200x200 ft. coal cleaning plant, to Roberts & Schaefer, 307 N. Michigan Ave., Chicago, Ill. Est. **$300,000** incl. equip. CD 1/30—ENR 2/6.

Pa., Wilkes-Barre—TROLLEY TRACK REMOVAL—L. K. Eldridge, city clk., removing trolley car tracks, various streets, bituminous repaving, own forces. Over **$50,000.** G. B. Walker, city engr. CD 6/23—ENR 6/26.

★**†S. C., Sumter**—GRADING and CLEARING —U. S. Eng., Charleston, grading, clearing airport site, to H. E. Wolfe Constr. Co., Inc., St. Augustine, Fla. **$575,176.** CD 6/5—ENR 6/12.

★**Texas** — TRANSMISSION LINES — Brazos River Transmission Electric Cooperative, Inc., E. D. H. Farrow, pres., Itasca, 306 mi. rural electric power transmission lines, various counties, to Taylor Constr. Co., Taylor. **$572,-123.** Bids 6/23, awarded 6/25. CD 6/30—ENR 7/3.

†Tex., Del Rio — AIRPORT IMPROVEMENTS—Civil Aeronautics Auth., c/o L. E. Elliott, mgr., Box 1689, Fort Worth, airport imprvs., clearing, grading, 500x4,400 ft. and 500x4,200 ft. landing strips, lights, beacon, etc., to Gerald Mora, 312 Sabine St., Houston. **$132,866.** Est. $135,000.

★**Tex., Fort Worth**—AIRFIELD IMPROVEMENTS—Airfield imprvs., clearing, removing 39 buildings, 18 mi. fence, 2 million sq. ft. concrete runways, 40,950 sewer and 24,500 ft. water lines, etc. **WPA. $2,678,226.** Freese & Nichols, Capps Bldg., Fort Worth, consult. engrs. CD 4/2—ENR 4/10.

★**†Tex., Harlingen** — TRAINING STATION —U. S. Eng., 1 and Douglas Sts., Wash., D. C., training station, barracks, officers' quarters, mess halls, shops, steel hangars, administration and school buildings, hospital unit, runways, field and area lighting sys., warehouses, all utilities, building streets throughout area, hard paved runways, etc., for Air Corps Cadets, to H. B. Zachry, c/o Builders Exch., San Antonio, and J. E. Morgan & Son, Waco. **$4,338,000.** CD 5/9—ENR 5/15, under Public Bldgs.

★**†Tex., Houston**—LANDINGS—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., landings, aprons, taxi strips, Ellington Field, to Gulf-Texas Austin Co. & Assoc. Ellington Field, about **$1,690,000.** Est. $2,000,000. CD 3/5—ENR 3/13.

★**†Tex., Midland**—FLYING SCHOOL—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., complete air advanced twin-engine and Bombardier Flying School, 65 barracks, 15 supply buildings, officers' club, 150 bed hospital, motor repair shop, theatre, 6 warehouses, bomb sight storage building, parachute building, 3 hangars, 7 mess halls, chapel, etc., 8 mi. west of here, to F. M. Reeves & Son and Cage Bros., Bishop. **$5,-360,000.** CD 6/20—ENR 6/26.

★**†Tex., Mission** — TRAINING CENTER — U. S. Eng., Santa Fe Ry. Bldg., Galveston, buildings, utilities, ground and field development for 35,000 personnel Air Corps Training Center, in vicinity of here, to Hill & Combs, 321 Melrose St., San Antonio, and Briggs Constr. Co., Harlingen and Pharr. **$3,860,000.**

Tex., Port Arthur—SWIMMING POOL—Rein.-con. swimming pool, to Paddock Eng. Co. of Texas, 2929 N. Fitzhugh Ave., Dallas, **$30,395.** (**Correction**-contractor.) CD 6/17—ENR 6/19 under CA.

★**†Tex., Sabine Pass**—NAVAL BASE—P. Wks. Officer, Navy Dept., Corpus Christi, naval section base (for small defense vessels), heavy timber, concrete docks and yards, dredging, lighting facilities, protective facilities from bombing, etc., to Brown Lane Co., Caulder St., Beaumont, and Central Contg. Co., Constr. Bldg., Dallas, approx. **$928,000.** CD 3/20—ENR 3/27.

†Tex., San Antonio—ATHLETIC COURTS, etc.—Con. Q.M., Fort Sam Houston, athletic courts, indoor track, etc., to W. J. Aldrich, Builders Exch. **$63,310.**

†Tex., San Antonio—RAILWAY TRACKS, etc.—U. S. Eng., Federal Bldg., Galveston, standard gage railway tracks, spurs, and yard switching sys., to W. A. Smith Union Natl. Bldg., Houston. **$31,070** base bid. Est. $70,000. CD 6/18.

UNCLASSIFIED (Contracts Awarded, Cont'd.)

★†**Tex., Sherman**—AIR TRAINING SCHOOL—U. S. Eng., Citizens Bank Bldg., Denison, air training school, 9 mi. roads and streets, water, gas, sanitary and storm sewers, electric distr. sys., 136 buildings, hospital, boiler house, steam heating distr. sys., etc., Part 1, to R. F. Ball Constr. Co., 300 S. Main St., Fort Worth, and Central Contg. Co., Construction Bldg., Dallas, **$3,087,681**; Part 2, to Gifford-Hill & Co., Inc., Mercantile Bldg., Dallas, **$1,981,405**. CD 7/2.

Tex., Terrell—AIRPORT—Dallas Aviation School, Love Field, Dallas, and Brady, dormitories, shop building, mess halls, administration building, canteen, etc., for airport and field on 500 acre site near here, for training RAF flyers, to J. B. Pirtle, c/o Dallas County Lumber Co., Irving, **$162,000**, est. $225,000; 2 steel hangars to Star Mfg. Co., 3012 S. Stiles St., Oklahoma City, Okla., approx. $68,000. CD 6/5—ENR 6/12.

Tex., Terrell—AIRPORT IMPROVEMENTS—Airport grounds imprvs., force account. **$40,000.**

Tex., Waco—SWIMMING POOL—L. T. Murray, mayor, swimming pool. **WPA. $84,500.** J. H. Strange, city engr.

†**Utah, Ogden** — GROUND MAGAZINES — Con. Q.M., ten 60 ft. underground magazines, 37mm Shell Loading Plant, Ogden Ordnance Depot, to J. J. Burke & Co., Kearns Bldg., Salt Lake City. **$105,561.** Bids 6/23. CD 6/19.

Va., Lynchburg—AIRPORT—Runway surfacing, Preston Glenn Airport, to Jesse R. Ford, Lynchburg. **$80,000.**

★†**Washington** — TRANSMISSION LINE — Bonneville Power Administration, P. O. Box 3537, Portland, Ore., Covington-Coulee transmission line, Inv. 2018, Schedule A, to H. H. Walker, 1323 Venice Blvd., Los Angeles, Calif., **$523,259**; Schedule B, to F. Ziebarth, Vancouver, **$245,872.** Bids 6/20. CD 6/24—ENR 6/26.

Wash., Seattle—PARK—Seattle Park Bd., Fourth Ave. and Battery St., imprv. parks, flood lighting fields, repairing buildings, clearing, drainage, rein.-con. retaining wall, asphalt surfacing, **WPA. $475,754.**

★†**Alaska, Anchorage** — RAILROAD — U. S. Eng. Central Bldg., Seattle, Wash., 11.2 mi. standard gauge railroad between head of passage canal in Pronce Sound and Turnagain arm of Cook Inlet, Southwestern Alaska, to West Constr. Co., Southboro, Mass. **$3,524,966.**

★†**Alaska, Naknek**—AIRPORT—Civil Aeronautics Auth., Commerce Bldg., Wash., D. C., airport, to Morrison-Knudsen Co., 319 Bway., Boise, Idaho. **$590,425.** CD 6/30—ENR 7/3.

★†**Hawaii**—ARMY PIER TERMINAL etc. —War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., army pier terminal and chemical, warfare service depot, Kapalama Basin., exten. pier Hickam Field, water supply imprvs., sewerage treatment plant, Wheeler Field and Schofield Barracks, to Pacific Bridge Co., 333 Kearny St., San Francisco, Calif., and Hawaiian Contg. Co., Ltd., 854 Kaahumanu St., P. O. Box 3468, Honolulu, T. H. **$1,385,815.** Civil Engineers Associated, consisting W. P. Day, Financial Center Bldg., and L. H. Nishkian, 525 Market St., San Francisco, Calif., archt. and engr.

Alta., Claresholm—AIR TRAINING DEPOT PAVING—Dpt. National Defense for Air, Ottawa, Ont., paving Commonwealth Air Training Depot, to Chappelle & Watt, Calgary, **$30,000.**

Alta., Edmonton—DEPOT BUILDINGS—Dpt. National Defense for Air, Ottawa, Ont., additional alterations to buildings at No. 3 Manning Depot, to Poole Constr. Co. Ltd., Tegler Bldg., **$300,000.**

B. C., Prince Rupert—AERODROME—Dpt. National Defense for Air, Ottawa, Ont., additional wood buildings at aerodrome to E. J. Ryan Contg. Co. Ltd., 445 Granville St., Vancouver, **$56,000.**

B. C., Victoria—SHIPBUILDING BERTHS—Victoria Mchy. Depot Ltd., 343 Bay St., shipbuilding berths, 75x460 ft., with 3x12 ft. plank decking, 30x480 ft. craneway, to Victoria Pile Driving Co., Ltd., 625 Fort St., **$42,000.** CD 4/28—ENR 5/30.

Man., Brandon—AERODROME—Dpt. Transport, Ottawa, Ont., developing aerodrome, rock excav., ditches, grading, drainage, hard-surfaced runways, to Long Lac Constr. Co. Ltd., Port Arthur, Ont., about **$370,000.**

N. S. Truro—RUNWAYS—Dpt. National Defense for Air, Ottawa, Ont., and Dpt. Transport, Ottawa, Ont., surfacing, draining runways at R. C. A. F. Station, at Debert, 7 mi. west of here, to Tomlinson Constr. Co. Ltd., 21 King St. E., Toronto, Ont. **$280,000.**

Ont., London — AIRPORT — Dpt. Transport, Ottawa, airport development, grading, drainage, excav., hard-surfaced runways, etc., to Towland Constr. Co. Ltd., London, about **$340,000.**

Que., Montreal—PUMP HOUSE — Canadian Tube & Steel Products Ltd., St. Patrick St., 24x24 ft., rein.-con., steel, brick pump house and partitions, to F. W. Ross, 660 Ste. Catherine St. **$90,000.**

Sask., Yorkton—AERODROME—Dpt. Transport, Ottawa, Ont., aerodrome development, grading, drainage, hard surfaced runways, taxi strip, S. F. T. school, to Carter-Halls-Aldinger Co. Ltd., Royal Bank Bldg., Winnipeg, Man. About **$62,000.**

LATIN AMERICA

South America, Brazil—Departamento de Predios e Aparelhamentos Escolares, City of Rio de Janeiro, through Dpt. School Bldgs. & Equipment, is calling for bids for constructing several schools. Any correspondence in connection with above schools should be addressed to Departamento de Predios e Aparelhamentos Escolares, Prefeitura do Districto Federal, Becco M. Carvalho, Rio de Janeiro.

PUBLIC BUILDINGS

PROPOSED WORK

★†**Ala., Huntsville**—War Dpt., 20 St. and Constitution Ave. N.W., chemical warfare plant, structures for manufacture and loading chemical shells, storage depots, laboratory, office and administration building, warehouse and shops. $40,000,000.

†**Ariz., Luke Field**—Defense Housing Coordination, C. F. Palmer, coordinator, Wash., D. C., 100 family dwelling homes for enlisted men and civilians, Army Airbase, near Litchfield Park.

★†**Ark., Little Rock**—Con. Q.M., Camp Joseph T. Robinson, additional buildings for $11,000,000 permanent tent camp.

†**Calif., Alameda** and **San Diego**—Yards & Docks, Navy Dpt., Wash., D. C., completing plans high explosive magazines, Alameda and San Diego. $192,000.

★**Calif., Fresno**—Housing Auth., plans by H. R. Lake & D. H. Horn, Mattei Bldg., 216 units, low rent housing, Cal. 6-1, 6-2 and 6-3, White, Latin-American and Negro races. $500,000. CD 11/18—ENR 11/21.

Calif., Riverbank—Riverbank Housing Auth., G. Staley, secy. and asst. dir., surveys soon, housing units. $175,000. R. G. de Lappe, 1901 Downey Ave., Modesto, archt. CD 3/8—ENR 3/20.

†**Calif., San Francisco**—Con. Q.M., Fort Mason, completing plans nurses' quarters, additions E and F for Letterman General Hospital in Presidio of San Francisco, Inv. W-6616-41-189.

★†**Conn., Hamden**—High Standard Mfg. Co., Inc., 61 Foote St., New Haven, construction, equipment plant for manufacture machine guns. $4,300,000. Defense Plant Corp. will finance.

★†**Conn., Naugatuck**—U. S. Rubber Co., Naugatuck, construction, equipment synthetic rubber plant $1,250,000. Defense Plant Corp. will finance.

†**Fla., Miami**—Defense Plant Corp., Wash., D. C., constructing, equipping plant. $81,650. Tycoon Tackle, Inc., will operate.

†**Ga., Macon**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 16 barracks, 4 mess halls, 5 administration buildings, 3 class rooms, post exchange, infirmary, recreation buildings, officers quarters, warehouse, 2 hospital wards, telephone sys. $467,100.

★†**Ill., Carbondale**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., preliminary surveys, construction, completion smokeless powder and bag loading plant, vicinity Lake Crab Orchard, near here. $10,000,000. Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, Mich., engrs.

★**Ind., Hammond** — Bd. Educ., plans by C. Bernard, 7421 Forest Ave., technical high school. $700,000. CD 4/2—ENR 4/4.

†**Ind., Marion** — Anaconda Wire & Cable Co., 25 Bway., New York, N. Y., construction, equipment plant for assault wire. $352,724. Defense Plant Corp. will finance.

Ind., Whiting—Bd. Educ., bids in August, high school addn. $300,000. C. Bernard, 7241 Forest Ave., Hammond, archt. CD 5/22—ENR 5/29.

†**Ia., Burlington**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., hospital, Burlington shell loading plant, $400,000.

★†**Ia., Des Moines**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., plant for manufacture small ammunition. $30,000,000. CD 6/16—ENR 6/26.

†**Ia., Dubuque**—National Youth Administration, Wash., D. C., shop with equip. $80,000.

Ia., Hawarden—E. I. Ericson, city clk., bids soon, light plant addn., incl. 1,000 kw. generator. $92,000. Buell & Winter, 508 Insurance Exch. Bldg., Sioux City, engrs.

Ia., Morning Sun—E. J. Walsh, town clk., electric light and power plant. Over $50,000. R. W. Gearhart, 349-21 St. S.E., Cedar Rapids, engr.

★**Ia., Sioux City**—Bids early in July, municipal auditorium. $750,000. K. E. Westerlind, 738 Badgerow St., Sioux City, archt. CD 4/2—ENR 4/10.

Ia., Slater — P. Rood, town clk., municipal electric light and power plant. Over $50,000. R. W. Gearhart, 349 21 St. S.E., Cedar Rapids, engr.

Kan., Kingsley—Bd. Educ., W. E. Woodard, supt., sketches by C. W. Shaver, United Life Bldg., Salina, and H. T. Blanchard, Garden City, 164x238 ft., brick, rein.-con. Junior-Senior High School. $200,000.

★†**Kan., Parsons**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., Montana-Parsons shell loading plant, Labette Co. $35,000,000.

†**Ky., Danville**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., bids soon, barracks, mess halls, shops, officers' quarters, guard house, red cross building, fire house and cold storage building, $372,319.

★†**Ky., Fort Knox**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 110 barracks, 31 mess halls 36 administration buildings, 10 recreational buildings, 3 infirmaries, 3 post exchanges, 3 guards houses, 4 class rooms headquarters building, 7 warehouses, fire station, grease rack, wash rack, gas station, motor repair shop, theatre, 3 hospital wards, post office, 9 officers' quarters, arms and gunnery buildings, utilities, telephone sys. $53,628,100.

★†**La., Baton Rouge**—Standard Oil Co., N. Baton Rouge, providing facilities for connecting huge Butadiene manufacturing plant, incl. new construction units for hook up, etc. $7,750,000. Defense Plant Corp. will finance.

†**Md., Baltimore**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 2 story, 100x200 ft., brick, steel experimental tool laboratory, motor transport school and auditorium, Camp Holabird.

Md., Baltimore—Baltimore Housing Auth., 709 E. Eager St., sketches completed by D. K. Este Fisher Assoc., 1012 N. Calvert St. Frederick Douglas low cost housing, Ext. K for colored tenants, USHA Proj. 8, Central Ave., Asquith, Orleans and Edythe Sts.

Md., College Park—University of Maryland, plans by H. P. Hopkins, 10 E. Mulberry St., Baltimore, 2 story, 120x276 ft., brick, steel armory, incl. drill hall, rifle range, etc., concrete fdns. $200,000.

★†**Md., Fort George G. Meade**—Con. Q.M. rejected bids June 24, hospital and other miscellaneous buildings. $668,440. CD 7/2.

★†**Mass., Lynn**—General Electric Co., 1 River Rd., Schenectady, N. Y., plant to manufacture reduction gears. $10,000,000. Defense Plant Corp. will finance.

Mich., Detroit—Bd. Educ., 1354 Bway. Ave., plans by McGrath and Dohmen, archts., 310 McKerchey Bldg., 3 story, bsmnt., brick, stone, steel rein.-con. school northwest section of city. $378,000.

Mich., Detroit—Detroit Housing Auth., 735 Randolph St., 200 unit housing for defense workers, Saarenin and Swanson, Cranbrook Rd., Bloomfield Hills, (Birmingham) archts.

Mich., Wyandotte—Municipal Serv. Comm., superstructure for power house. Over $100,000. Burns & McDonnell, 107 W. Linwood Blvd., Kansas City, Mo., engrs.

★†**Minn., St. Paul**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., plant for manufacture small ammunition. $30,000,000.

Mo., Cape Girardeau—City Housing Auth., plans by L. Roy Bowen & Associates, 315 N. 7 St., St. Louis, white and negro housing project. CD 2/18—ENR 2/20.

★†**Nev., Hawthorne** — Yards & Docks, Navy Dpt., Wash., D. C., completing plans 21 high explosive magazines for mines $315,000, 21 high explosives for bombs $315,000, 13 smokeless powder magazines $338,000, 17 projectile magazines $765,000, 1 inert storehouse.

†**N. J., Fort Monmouth**—War Dpt., 20 St. and Constitution Ave. N.W., 8 barracks, 1 recreational building, 2 mess halls, 3 administration buildings, class room, officers quarters, hospital ward, telephone sys. $299,300.

N. J., Trenton—State Quartermaster General Dept., State House, 4 (colored) National Guard Armories, in Newark, Atlantic City, Camden and Trenton. $300,000.

N. M., Las Vegas—L. Encinas, clk. San Miguel Co., approved $200,000 bonds, courthouse and jail.

★**N. Y., Brooklyn**—Bd. Educ., 110 Livingston St., plans by E. Kebbon, c/o owner, South Flatbush Vocational High School. $2,700,000.

†**N. Y., Great Bend**—Con. Q.M., Pine Camp, repair building. $338,000.

★**N. Y., Jamaica**—Bd. Educ., 110 Livingston St., Brooklyn, plans by E. Kebbon, c/o owner, Thomas Edison High School. $2,700,000.

N. Y., Luzerne—Bd. Educ., Central School Dist., school. $285,000.

★**N. Y., New Rochelle**—New Rochelle Housing Auth., 271 North Ave., plans by L. Lyon, 271 North Ave., 265 unit negro housing, Winyah Ave. $1,400,000.

★**N. Y., New York**—Bd. Educ., 110 Livingston St., Brooklyn, plans by E. Kebbon, c/o owner, West Bronx Vocational High School. $3,126,093.

★**N. Y., New York**—Bd. Educ., 110 Livingston St., Brooklyn, plans by E. Kebbon, c/o owner, Morris Park Vocational High School. $2,793,180.

N. Y., New York—Dpt. Hospitals, 125 Worth St., plans by A. J. Daidone, c/o owner, 4 story offices and health center, 8 and 10 W. 136 St. $450,000.

PUBLIC BLDGS. (Proposed Work, Cont'd.)

★**N. C., Randolph**—$600,000 bond election Oct. 7, school for Bd. Educ., L. F. Ross, Asheboro, chn.

N. C., Statesville—Iredell Co. Bd. Educ., S. H. Troutmans, chn., school imprv. program. $250,000. Bond election soon.

★†**O., Akron**—Firestone Tire & Rubber Co., 1278 S. Main St., constructing, equipping synthetic rubber plant. $1,250,000. Defense Plant Corp. will finance.

★†**O., Akron**—Hydro-Carbon Chemical & Rubber Co. (subsidiary B. F. Goodrich Co., 500 S. Main St.), constructing, equipping, synthetic rubber plant. $1,250,000. Defense Plant Corp. will operate.

★**O., Akron**—Bd. Educ., high school, Ellet Dist., East Akron. $538,000.

★†**O., Dayton**—Federal Works Agency, Wash., D. C., 500 family dwelling units, Shakertown Pike. $1,750,000.

★†**Okla., Fort Sill**—Con. Q.M., building facilities for housing 2 field artillery battalions. $750,000.

†Okla., Fort Sill—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 16 barracks, 4 administration buildings, 4 class rooms, officers quarters, 2 hospital wards, telephone sys. $398,300.

★†**Pa., Erie**—General Electric Co., 1 River Rd., Schenectady, N. Y., plant for manufacture turbines. $10,000,000. Defense Plant Corp. will finance.

†**Pa., Middletown**—U. S. Eng., 332 Post Office Bldg., Baltimore, Md., rejected bids June 18, engine repair building. Will readvertise. CD 6/20—ENR 6/26 under LB.

★†**Pa., Pittsburgh**—Allegheny Co. Housing Auth., rejected bids June 27, Glen Hazel Heights defense housing, Hazelwood Dist., Sugar Hill, for FWA. $4,500,000. CD 6/24.

★**Pa., Pittsburgh** — Pittsburgh Housing Auth., Dr. B. J. Hovde, administrator, 1305 Law & Finance Bldg., rejected bids May 26, 246 apartments. $1,000,000. New bids soon. CD 6/4—ENR 6/12 under LB.

★†**Tenn., Chattanooga**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., expansion sulphuric acid plant, Copper Hill. $2,375,000.

Tex., Bay City — Bay City Independent School Dist., c/o E. O. Hutchinson, supt., voted bonds 1 story high school. $150,000. Hedrick & Lindsley, Inc., c/o Southern Standard Bldg., Houston, archts. CD 3/21—ENR 4/3.

Tex., Brownfield—Bd. Educ. plans by M. C. Butler, Lubbock, brick, stone school. $165,000. Bonds voted.

★**Tex., Dallas**—Voted bonds public market. $500,000. Hoke Smith, Union Natl. Bldg., engr. CD 5/29.

Tex., Dallas—Bd. Educ. voted bonds and bids soon. mechanical shop. $150,000. CD 5/22—ENR 5/29.

Tex., Dallas—Bd. Educ., 506 S. Akard St., plans completed by Goodwin & Tatum, Burt Bldg., 1 and 2 story elementary school Bluffview Estates. $245,600; plans completed by Gill & Bennett, Great Natl. Bldg., 1 story, brick, stone school, Oak Cliff. $188,000.

★**Tex., Fort Worth**—Bd. Educ., E. P. Williams, bus mgr., 409 E. Weatherford St., 1 and 2 story, 40x300 ft. technical high school. $600,000. W. G. Clarkson & Co., 1st Natl. Bank Bldg., archt. CD 5/22—ENR 5/29.

★†**Tex., Galveston**—Federal Works Agency, 7 and D Sts. S.W., Wash., D. C., defense housing suitable for Army officers quarters and other personnel. $500,000.

★**Tex., Grand Prairie**—Grand Prairie Independent School, G. W. Spikes, pres., 3 school buildings, repairing school. $500,000. DeWitt & Washburn, Praetorian Bldg., Dallas, archts. CD 5/5—ENR 5/8.

†**Tex., Hitchcock**—Con. Q.M., Camp Wallace, cancelled bids to have been opened June 26, 6 ordnance buildings, 1 administration building, 1 barrack. CD 6/17—ENR 6/19.

†**Tex., Hitchcock**—Con. Q.M., Camp Wallace, cancelled bids to have been opened July 1, 1 dental clinic, ambulance garage, strong room for Station Hospital. CD 6/27—ENR 6/3.

†**Tex., Hitchcock**—Con. Q.M., Camp Wallace, cancelled bids to have been opened July 16, 1 storehouse and 1 closed motor shed. CD 7/1.

†**Tex., Hitchcock**—Con. Q.M., Camp Wallace, cancelled bids to have been opened July 22, motor repair shops and theatre. CD 7/3.

†**Tex., Midland**—U. S. Eng., c/o Citizens Bank Bldg., Denison, additional facilities, photographic laboratory, 3 schools, storage, utilities Federal Flying School. $141,570.

Tex., Mineral Wells—Bd. Educ., W. A. Ross, supt., plans by P. M. D. Geren, 806½ Burnet St., school imprvs. $150,000.

★**Tex., San Antonio**—U. S. Eng., Federal Bldg., Galveston, constructing, equipping central steam heating plant, Duncan Field. $100,000.

†**Tex., San Antonio**—Con. Q.M., Fort Sam Houston, seven 1 and 2 story administration buildings. $175,000.

★†**Tex., San Antonio**—Con. Q.M., Fort Sam Houston 3- to 4-story wing to Base Hospital plant. $500,000.

†**Tex., San Antonio** — U. S. Eng., Federal Bldg., Galveston, air corps observation squadron stations, incl. mess halls, officers quarters, gasoline storage, etc., to serve 111th and 122nd Observation Squadrons, Stinson Field. $157,190.

†**Tex., San Antonio**—U. S. Eng., Federal Bldg., Galveston, 1 story frame barracks, for negro troopers, Randolph Field. $90,000.

†**Tex., San Antonio**—Con. Q.M., Fort Sam Houston, warehouse for pontoon equipment storage. $100,000.

★†**Tex., San Antonio**—Con. Q.M., Kelly Field, 360 bed hospital, dental clinic, 2 infirmaries, utilities $643,570; theatre $150,000.

Vt., Johnson—State, Bd. Educ., State House, Montpelier, plans by P. R. Webber, 42 Merchants Row, Rutland, 2 story, bsmnt., brick, stone dormitory and administration building, concrete fdn. Johnson Normal School. $150,000.

★†**Va., Camp Lee**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 52 barracks, 15 mess halls, 16 administration buildings, 6 recreation buildings, 5 class, post exchange, 4 officers quarters, 3 warehouses, 5 hospital wards, motor repair shop, gasoline station, grease and wash racks, oilhouse, telephone sys. $1,497,100.

★†**Va., Fort Eutis** — War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 20 barracks, 6 mess halls, 6 administration buildings, 4 class rooms, infirmary post exchange, recreational building, warehouse, 2 hospital wards, 2 officers quarters, telephone construction. $625,150.

†**Wash., Fort Lewis**—War Dpt., 20 St. and Constitution Ave. N. W., Wash., D. C., recreation service club building. $20,000.

★**Wash., Renton** — Government Defense Plant Corp., Wash., D. C., 900x1100 ft. main assembly building, warehouse, office building, personnel building, boiler house and 2 paint shop buildings for seaplane plant. $5,000,000. Boeing Aircraft Co. will operate.

†Wash., Spokane — Government Defense Plant Corp., Wash., D. C., aluminum reduction plant producing 60,000,000 lb. per year. Over $40,000.

†Wash., Spokane — Government Defense Plant Corp., Wash., D. C., magnesium plant producing 24,000,000 lb. per year.

†Wash., Tacoma—Government Defense Plant Corp., Wash., D. C., aluminum plant producing 30,000,000 lb. per year.

Wis., Neillsville—Clark Co., plans by H. M. Nelson, 204 E. Grand Ave., Eau Claire, 1 story, 80x100 ft., wing 24x50 ft., concrete blocks, structural steel shop. O. J. Weymiller, Neillsville, engr.

★†**Wyo., Fort Francis E. Warren**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 32 barracks, 9 mess halls, 10 administration buildings, class rooms, post exchange, theatre, guest house, service club, 2 recreational buildings, 2 officers quarters, 2 warehouses, 3 hospital wards, telephone sys., etc. $1,188,250.

†**Canal Zone**—Con. Q.M., P.C. Dpt., Quarry Heights, Canal Zone, cancelled bids to have been opened July 11, armament and instrument inspection and adjustment building, Howard Field and Albrook Field, Canal Zone; adv. ENR 7/10. CD 6/18—ENR 6/26.

Que., Val d'Or—Dpt. Mines & Fisheries, Quebec City, bids soon, cyanide plant at Provincial Mine School. Est. about -50,000. A. O. Dufresne, c/o owner, engr.

BIDS ASKED

Bids Asked July 14

†**Pa., Heidelberg**—Allegheny Housing Auth., 201 County Office Bldg., Pittsburgh, 250 family defense housing, Scott Twp., Pa. 36212, for FWA. J. W. Hoover, Keystone Bank Bldg., Pittsburgh, archt.

Bids Asked July 15

Ia., Des Moines—Polk Co., O. Lindstrum, aud., hospital. $380,000. Dougher, Rich & Woodburn, 310 Old Colony Bldg., Des Moines, archts. CD 6/2—ENR 6/5.

★†**Ky., Avon**—Con. Q.M., Lexington, warehouses, service station, motor repair garage, paint oil and dope house, sentry house, heating plant, steam distr. sys. $2,000,000. Allied Eng. & Architects, c/o J. S. Watkins, J. F. Wilson, G. S. Bell and J. K. Latham, McClelland Bldg., Lexington.

†**Ky., Lexington**—Con. Q.M., administration bldg., warehouses, paint shop, sentry house, heating plant, steam distr. sys., fencing, etc.; adv. ENR 7/10.

†**Pa., Clairton**—Allegheny County Housing Auth., 201 County Office Bldg., Pittsburgh, 450 family defense housing, Dora Farm site, for FWA. Schwab, Palmgreen & Hutchins, Amer. Bank Bldg., Pittsburgh, archts. CD 5/28—ENR 6/5.

Bids Asked July 16

†**Md., Baltimore**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., motor transport school, auditorium and experimental

Bids Asked July 17

N. J., Teaneck—Bd. Educ., 2 story, bsmnt., 150x200 ft., brick, steel Grade School 2, $250,000. Hacker & Hacker, Fort Lee Trust laboratory. CD 7/2.

Co. Bldg., Fort Lee, archts. Albert Fentaiff, Inc., 11 W. 42nd St., New York, N. Y., archt.

Bids Asked July 18

N. Y., Brooklyn—Dpt. P. Wks., Municipal Bldg., New York, Brooklyn Terminal Market, on site bounded by Remsen Ave., Avenue D, Foster Ave., E. 83 St. and property of Long Island R.R. CD 6/30—ENR 7/3.

Bids Asked July 21

†**Fla., Key West**—U. S. Eng., Jacksonville, structural steel storage building, Fort Taylor; adv. ENR. 7/10.

Bids Asked July 22

★**Calif., Los Angeles**—Housing Auth., city of Los Angeles, 1250 Western Pacific Bldg., 400 unit low rent housing, Pueblo Del Rio housing, 55 and Long Beach Blvd. $1,780,000. Southeast Housing Project Architects, 505 Architects Bldg., archts. E. A. Evans, 437 S. Hill St., engr. CD 7/2—ENR 7/11.

N. Y., New York—New York City Housing Auth., Demolition Div., G. Swope, chn., 122 E. 42 St., demolition buildings and structures in Chelsea Houses Proj. area, 10 Ave., 25, 26 and 27 Sts. CD 1/29—ENR 2/6.

Bids Asked July 25

†**S. D., Fort Thompson**—Office Indian Affairs, Dpt., Interior, Wash., D. C., employees quarters, utilities.

Bids Asked July 26

★†**Conn., Fairfield**—Federal Works Agency, 7 and D Sts. S.W., Wash., D. C., 200 dwelling units, 2 story, brick, concrete, Burrough Rd. $600,000. Visscher & Burley, 51 E. 42 St., New York, N. Y., archts. CD 6/11—ENR 6/19.

★†**Conn., Fairfield**—Federal Works Agency, 7 & D Sts, S.W., Wash., D. C., 200 frame homes, Knapps Hy. $700,000. J. Gerald Phelan, 1336 Fairfield Ave., Bridgeport, archt. CD 6/11—ENR 6/19.

Bids Asked July 28

Wash., Black Diamond—King Co. Housing Auth., County-City Bldg., Seattle, 27 old frame houses and 50 new dwelling units. $150,000. E. W. Morrison, Textile Tower, Seattle, archt. CD 12/26—ENR 1/2.

Bids Asked July 29

†**Ga., Athens**—Pub. Bldgs. Administration, Wash., D. C., post office and courthouse, except elevator.

★**Pa., Erie**—Erie Housing Auth., M. A. Zurn, chn., 224 homes, Harbor Homes housing development. USHA. $1,094,000. Meyers & Johnson, 821 Commerce Bldg., archts. Hill & Hill, Northeast, civil engr. G. Arthur Danielson, 14 W. 8 St., plumbing, heating engr. Beman & Candeen, 374 Delaware Ave., Buffalo, N. Y., electircal engr. CD 5/5—ENR 5/8.

Wash., Pullman—Washington State College Pullman, 2 story, brick veterinary clinic building, $150,000, H. Bertelsen, Empire State Bldg., Spokane, archt.; engineering laboratory building, $150,000, Rigg & Vantyne, Peyton Bldg., Spokane, archts.; veterinary classroom building, $200,000, Whitehouse & Price, Hutton Bldg. Spokane, archts. CD 1/27—ENR 1/30.

Bids Asked July 30

†**D. C., Bolling Field**—U. S. Eng., 1 and Douglas Sts. N.W., Wash., D. C., armament and instrument inspection and adjustment building; adv. ENR 7/10.

★**La., New Orleans**—Bd. Comrs. Port of New Orleans, 2 Canal St., 1 story 440x792 ft. warehouse and factory, adjacent to Turning Basin on Inner Harbor Navigational Canal. $750,000; adv. ENR 7/10.

Bids Asked August 2

★**Ill., Rockford**—Winnebago Co. Housing Auth., Rockford, 200 unit housing. Over $500,000. USHA. R. A. Orput, Empire Bldg., Rockford, archt. CD 6/11—ENR 6/19.

Bids Asked

†**Ill., Fort Sheridan**—War Dpt., 20th St. and Constitution Ave. N.W., Wash., D. C., ordnance repair shop. $40,000.

†**Tex., San Antonio**—Con. Q.M., Fort Sam Houston, metal, steel warehouse unit. $450,000.

Sask., Regina—Van Egmond & Storey, archts., McCallum Hill Bldg., hospital addn., for Grey Nuns Hospital, Dewdney St. $160,000.

LOW BIDDERS

†**Ala., Anniston**—Con. Q. M., Fort McClellan, June 25, 2 motor repair shops, grease inspection shop, oil house, 10 car wash rack for 3rd Eschelon Repairs, from A. J. Honeycutt Co., 2512-8 Ct. N., Birmingham. **$90,000.**

†**Ala., Anniston**—Con. Q.M., Fort McClellan, June 27, standard ordnance shop with 10 ton crane and boiler house, from Perusini Constr. Co., Inc., Martin Bldg., Birmingham. **$49,288.**

★†**Ala., Mobile**—U. S. Eng., Federal Bldg., engine test building, Brookley Field, from Foster Creighton Co., Amer. Natl. Bank Bldg., Nashville. **$892,690.** CD 6/17—ENR 6/19.

†**Ala., Montgomery**—War Dpt., 20 St. and Constitution Ave. N.W., June 28, Wash., D. C., instrument inspection building, ☆569-41-493, from Algernon Blair, 1st Natl. Bank Bldg. **$91,468.**

PUBLIC BLDGS. (Low Bidders, Cont'd.)

†**Ark., Little Rock**—Con. Q.M., Camp Joseph T. R. Robinson, 38 buildings, 210 tent frames and 1 tent theatre, from Buford Bracy, 2816 W. 16 St. **$314,000.**

†**Calif., Camp San Luis Obispo**—Con. Q.M., June 25, cantonment structures, 2 barracks, 1 mess, dayroom, officers quarters, infirmary, etc., Inv. QM 6948-41-4, at Jolon, from F. C. Stolte Co., 203 Pine St., San Francisco, **$169,400.** CD 6/18.

†**Calif., Fort Baker** — Con. Q. M., Fort Mason, hospital buildings, from Meyer Constr. Co., 735 Portola Dr., San Francisco. **$399,178.** CD 6/30—ENR 7/3.

†**Calif., Fort Ord**—Con. Q.M., miscellaneous buildings, Inv. Q.M.-6665-41-47, from F. J. Twaits & Morrison-Knudsen, Box 337, Paso Robles. **$186,510.** CD 6/30—ENR 7/3.

★†**Calif., McClellan Field**—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, temporary barracks, exten. engine test building, from F. J. Twaits, 816 W. 5 St., Los Angeles. **$879,240.** Est. $568,000. CD 6/24.

†**Calif., McClellan Field**—U. S. Eng., 208 Postoffice Bldg., Sacramento, June 28, 14 temporary buildings, barracks, day rooms, mess hall and hospital units, from Moore & Roberts, 693 Mission St., San Francisco. **$162,458.** CD 6/25.

†**Calif., Moffett Field**—National Advisory Com. for Aernautics, Ames Laboratory, Moffett Field, June 27, 2 story, science building, from Schuler & McDonald, 1719-16 St., Oakland, **$204,973.** CD 6/11—ENR 6/19.

†**Calif., Muroc**—U. S. Eng., 751 S. Figueroa St., Los Angeles, June 30, ordnance buildings, Muroc Lake Bombing Range, Kern Co., from W. S. Disteli, 3110 West 43 Pl., Los Angeles. **$307,416.**

★†**Calif., Sacramento**—U. S. Eng., Cronan Bldg., June 27, 14 structural steel and rein.-con. warehouses, McClelland Field, near here, from J. I. Barnes, Central Tower, Santa Monica. **$782,000.** CD 6/20.

†**Calif., San Diego**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., additional buildings, Camp Callan from J. & B. Constr. Co., 5572 Valley Blvd., Los Angeles. **$150,138.**

†**Calif., San Miguel**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., June 25, 4 ordnance storage houses, 12 magazines, 11 day rooms, 1 hospital recreation building, 3 gasoline stations, 4 gasoline pumps, etc., Camp Roberts, from F. C. Stolte, 203 Pine St., San Francisco. **$304,980.** CD 5/7—ENR 5/15.

Del., Dover—State Hy. Dpt., Dover, June 26, Contr. 787, administration building, from J. A. Bader, Lackey Bldg., Wilmington. **$157,200.**

†**D. C., Washington**—Public Bldgs. Administration, July 1, temporary Building M, from McCloskey & Co., 1618 W. Thompson St., Phila., Pa., Bid 1, **$357,700.**

†**Ga., Fort Oglethorpe**—Con. Q.M., reception center from R. M. Lee Co., 337 W. Peachtree St., Atlanta, **$341,100.** CD 4/28—ENR 5/1.

†**Ill., Rockford**—Pub. Bldgs. Administration, Wash., D. C., 80 housing units, Camp Grant, from J. P. Cullen & Son, Janesville, Wis. **$286,627.** CD 4/25—ENR 5/1.

†**Ill., Scott Field (Belleville P. O.)**—U. S. Eng., 816 Court House & Custom House, St. Louis, Mo., June 27, 2 boiler houses and steam distr. sys. for 6 radio schools and other buildings, from Thomas J. Sheehan Co., 2233 Olive St., St. Louis, Mo. **$312,221.**

★†**Ind., La Porte**—Pub. Bldgs. Administration, Wash., D. C., June 23, 200 housing units, 2 management and maintenance buildings, from James I. Barnes Constr. Co., Logansport. **$685,000.**

†**La., Leesville**—Con. Q.M., Camp Polk, June 25, storage shed, from LeBlanc Bros., Baton Rouge, **$229,112.** CD 6/20.

†**La., New Orleans**—Con. Q.M., 101 Marietta Bldg., Atlanta, Ga., 20 new frame cantonment type buildings for temporary housing, utilities, Jackson Barracks, from E. P. Farnsworth & Co., Inc., 1515 S. Salcedo St., **$181,597.**

†**Md., Baltimore**—Veterans Administration, Vermont Ave. between H and I Sts., Wash., D. C., June 26, boiler house No. 226, Fort Howard, from Wilaka Constr. Co., Inc., 384 East 149 St., New York, N. Y. **$236,000.** CD 5/2—ENR 5/8.

★†**Md., Baltimore**—Veterans Administration, Vermont Ave. between H and I Sts., Wash., D. C., June 26, hospital building, Fort Howard, from Auf der Heride Aragona, Inc., 5510 Jackson St., West New York, N. J. **$874,300.** CD 5/2—ENR 5/8.

★†**Md., Beltsville**—Dpt. Agriculture, The Mall between 12 and 14 Sts., Wash., D. C., North and South laboratory buildings, ea. 4½ story, 82x187 ft. rein.-con., from J. D. Hedin Constr. Co., 820 Michigan Ave., Wash., D. C., **$585,000.** CD 6/3—ENR 6/5.

†**Md., Fort George G. Meade**—Con. Q.M., ordnance building, from C. Ralph Leland, Central Savings Bank Bldg., Baltimore. **$81,580.** CD 6/9—ENR 6/12.

†**Md., Fort George G. Meade**—War Dpt., 20 St. and Constitution Ave., Wash., D. C., motor repair shop, oil house, etc., from Hadley Constr. Co., 1213 Wood St., Phila., Pa., **$135,395.** CD 6/13—ENR 6/26.

Mass., Agawam — Town, June 25, 2 story, 60x100 ft., brick, steel, concrete garage, service and offices, from L. D. Phillips Constr. Co., 10 Main St., Westfield, **$84,744.** CD 6/17 ENR 6/19.

★†**Mass., Ayer**—Con. Q.M., Fort Devens, June 27, recruit reception center, etc., QM 6101-41-48, from Rugo Constr. Co., Inc., 80 Boylston St., Boston, **$487,000;** 2 administration bldgs., red cross unit, QM 6101-41-47, from John Bowen Co., 129 Newberry St., Boston. **$176,500.** CD 6/24.

†**Mass., Falmouth**—Con. Q.M., Camp Edwards, June 27, motor repair shops, grease and inspection racks, 3 oil storage houses, concrete wash racks, etc., Q.M. 6863-41-17, from Carilli Constr. Co., 281 Adams St., Dorchester, **$325,972.** CD 6/24.

★†**Mass., Falmouth**—Con. Q.M., Camp Edwards, June 27, ward patients recreation building and 13 day rooms and officers mess hall, from Di Sandro Bros., 93 Eddy St., Providence, R. I., **$233,189.**

†**Mass., Falmouth**—Con. Q.M., Camp Edwards, June 27, various buildings for 12 anti tank companies, from Joseph E. Bennett, 91 Newbury St., Boston, **$185,969.** CD 6/24.

†**N. J., Fort Dix**—War Dpt., 20 St. and Constitution Ave. NW., Wash., D. C., gymnasium at Fort Dix, from Hadley Contg. & Constr. Co., 1213 Wood St., Phila., Pa. **$86,000.**

†**N. J., Fort Monmouth**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., June 24, 9 frame hospital buildings, motor repair shops, radio school and transmitter building, from John N. Webster, 320 Amboy Ave., Metuchen, **$200,000.** CD 6/17—ENR 6/19.

N. J., Irvington—Town, June 24, 2 story, bsmnt., brick, concrete, steel hospital addn., from H. Huber, Inc., 671 Broad St., Newark, **$154,300.** CD 6/18.

★†**N. C., Fort Bragg**—Con. Q.M., June 25, mobilization type building, corrals and fencing, from V. P. Loftis, Builders Bldg., Charlotte, **$858,800.** CD 6/17—ENR 6/19.

★†**Pa., Scranton**—Scranton Housing Auth., H. C. Case, secy., J. Coyle, exec. dir., Lincoln Trust Bldg., July 1, general contract 20 low cost housing units, and recreation building, from Caulway Inc., 1841 Bway., New York, N. Y., **$749,000;** plumbing, from R. T. Frye & Co., 623 10 Ave., New York, N. Y. **$113,737.** CD 6/6—ENR 6/12.

†**S. C., Spartanburg**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., officers clubhouse, warehouse for post exchange, office for finance, ordnance and Q.M. detachments, 30 bays of closed sheds for motor vehicles, 20 ton ice dock, 2 motor repair shops, oil storage, grease racks, etc., for Infantry Replacement Training Center, from Kahn Constr. Co., 714 Lody St., Columbia, and Boyle Constr. Co., Sumter. **$190,820.** CD 5/7 and 5/12—ENR 5/15.

†**S. C., Spartanburg**—Con. Q.M., Camp Croft, June 24, 13 buildings, from Southeastern Constr. Co., 218 W. 2 St., Charlotte, N. C., **$222,153.**

Tenn., Memphis—Bd. Penal and Charitable Institutions, Nashville, June 26, hospital, from Lee Constr. Co., 166 Monroe Ave., **$410,000.** CD 6/11—ENR 6/19.

†**Tex., Abilene**—Con. Q.M., Camp Barkeley, June 26, motor equip. repair shop, grease and inspection rack, wash rack, oil house, utilities, from Rose Constr. Co., Abilene. **$61,000.**

Tex., College Station—A & M College, F. M. Law, pres. Bd., June 25, 3 story, bsmnt., rein.-con., brick agricultural adjustment administration building, from W. S. Bellows Constr. Co., Bankers Mortgage Bldg., Houston, **$202,600** base bid. CD 6/10—ENR 6/12.

†**Tex., San Antonio**—U. S. Eng., Federal Bldg., Galveston, June 26, buildings, barracks, administration, day rooms, mess hall, etc., Brooks Field, from J. O. Boyd Constr. Co., 4954 Cass St., Dallas, **$496,461.** CD 6/16—ENR 6/19.

★†**Tex., Wichita Falls**—U. S. Eng., Cotton Exch. Bldg., Dallas, 79 one story buildings for hospital unit, from C. E. McKee, El Paso, **$1,758,359.** CD 6/18—ENR 6/26.

†**Vt., Fort Ethan Allen**—Con. Q.M., June 26, motor repair shops, grease racks, etc., QM 6671-15, from Carilli Constr. Co., 281 Adams St., Dorchester, Mass., **$85,792.**

★†**Va., Camp Lee**—Con. Q.M., June 23, 8 motor repair shops and 12 class room buildings, also 23 buildings, from James I. Barnes Constr. Co., Greensboro, N. C., **$525,137** and **$194,850** respectively. CD RN5/1—ENR 5/8.

†**Wash., Bremerton**—Puget Sound Navy Yard, June 28, storehouses, magazines Naval Ammunition Depot, from A. F. Mowat, 1331 Third Ave. Bldg., Seattle. **$163,893.** CD 6/20.

†**Wash., Fort Lewis**—Con. Q.M., June 26, 16 regimental chapels, Inv. 6105-41-113, from H. R. Olsen, 4040 Pacific St., Tacoma. **$268,876.** CD 6/20.

†**Wash., Fort Lewis**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., June 30, Third Echelon shops, Inv. 6105-41-128, from Sound Constr. & Eng. Co., Northern Life Tower, Seattle. **$210,000.**

†**Wash., Midway**—Bonneville Project, P. O. Box 3537, Portland, Ore., July 3, operators cottages, dormitory and garages, Inv. 1892 from A. Yonker, 1950 S.E. 32 St., Portland, Ore. **$151,788.** CD 6/18—ENR 6/26.

★†**Wash., Seattle**—Con. Q.M., 1515 S. Alaskan Way, June 28, warehouse, port of embarkation, from Western Constr. Co., Textile Tower. **$1,525,450.** CD 6/24.

†**Wash., Spokane**—Pub. Bldgs. Administration, Wash., D. C., June 30, housing units, Geiger Field, from B. H. Sheldon, 2022 W. 3 St. **$489,800.** CD 6/24.

★†**T. H., Fort Shafter**—Con. Q.M., Fort Shafter, tunnel and cold storage plant, Inv. QM-6812-41-53, from Hawaiian Dredging & Morrison Knudsen Co., Honolulu, T. H., **$920,000.** Above bid received at Fort Shafter, no bids received at San Francisco, Calif. CD 6/17.

CONTRACTS AWARDED

†**Ala., Anniston**—Con. Q. M., Fort McClellan, June 25, recreational buildings, utilities, etc., to A. J. Honeycutt Co., Inc., 2512 8 Court N., Birmingham, Ala. **$195,518.** CD 6/17—ENR 6/19.

★†**Ala., Sylacauga**—War Dpt., 20 St. & Constitution Ave. N.W., Wash., D. C., construction, operation, plant for manufacture TNT, DNT and tetryl, to E. I. DuPont de Nemours & Co., DuPont Bldg., Wilmington, Del. Est. **$24,675,000.** CD 6/20—ENR 6/26.

Ariz., Tucson—Bd. Regents University of Arizona, 4 story dormitory, to E. S. Gerckens, Tucson. **$223,000.** Bids 6/28. CD 6/17—ENR 6/19.

★†**Ark., Marche**—War Dpt., 20 St. and Constitution Ave., Wash., D. C., design and construction picric acid plant, Maumelle Ordnance Works, to Lummus Co., 420 Lexington Ave., New York, N. Y. Est. **$8,000,000.** CD 6/20—ENR 6/26.

★†**Calif., Benicia**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., ordnance storage depot, incl. asphalt roads, railroad loading platforms, bridges, underground railroad, imprv. igloo magazines, underground storage magazines and warehouse to Eaton & Smith & E. P. Moran, 715 Ocean Ave., San Francisco. **$3,089,779.** C. C. Kennedy, 604 Mission St., San Francisco, archt. and engr.

★†**Calif., Fort Ord**—War Dpt., 20 St. and Constitution Ave. N. W., Wash., D. C., motor transport facilities, maintenance and warehouse shops, buildings, utilities, for 4th Echelon Motor Repair Base, to Cahill Bros., 206 Sansome St., San Francisco **$1,230,171.** Hunter & Hudson, San Francisco, Archts. and Engrs.

★†**Calif., Fort Ord**—Public Bldgs. Administration, Wash., D. C., 286 housing units, to Dinwiddie Constr. Co., Crocker Bldg., San Francisco. **$877,000,** cost-plus-basis. CD 6/3—ENR 6/12.

†**Calif., Riverside**—War Dpt., 20 St. and Constitution Ave., N.W., Wash., D. C., 25 temporary buildings, 2 grease racks, 2 wash racks, etc., Camp Haan, to J. E. Burrell & Son, 518 West 17 St., Long Beach. **$366,700.**

★†**Colo., Denver**—U. S. Eng., 1709 Jackson St., Omaha, Neb., temporary housing and hospital facilities, Lowry Field, to Mead & Mount Constr. Co., Denver Natl. Bank, Denver. **$1,194,855.** Bids 6/30. CD 6/26.

Colo., Las Animas—City, c/o T. Dennison, power plant, to Fairbanks-Morse, Chicago, Ill., **$228,500.** Bids 6/24, awarded 6/25. CD 5/19—ENR 5/22.

★†**Ga., Conley**—Con. Q.M., 101 Marietta St. Bldg., Atlanta, to A. Farnell Blair, 215 Church St., Decatur, 10 additional warehouses, **$2,500,000;** 4 sheds for Signal Corps., **$500,000;** special sheds for Engineers Corps., **$210,000** ***to Central Contg. Co., 1st Natl. Bank Bldg., Atlanta, Fourth Echelon Motor transport building, **$4,000,000*****to A. K. Adams Co., 542 Plum St. N.W., Atlanta, administration building, **$672,000*****to Beers Constr. Co., miscellaneous buildings, **$373,000.** Grand total $8,255,000.

†**Ga., Fort Benning**—Con. Q. M., additional hospital buildings, to Murphy Pound, Hill Bldg., Columbus. **$192,100.**

†**Ill., Fort Sheridan**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 2 magazines, day labor. Bids 5/15 rejected. CD 5/1—ENR 5/8.

★†**Ill., Savanna** — Con. Q. M. Savanna Ordnance Depot, 14 inert material warehouses, etc., to Manhattan Constr. Co., Manhattan Bldg., Muskogee, Okla. **$968,300.** Bids 6/24. CD 6/27—ENR 7/3.

Ill., Wilmette—Bd. Educ., Dist. 39, 1 story school, to A. E. Johnson, 4041 N. Kilbourn Ave. Est. **$150,000.** Childs & Smith, 430 N. Michigan Ave., Chicago, archts.

★†**Ia., Burlington**—Pub. Bldg., Administration, Wash., D. C., 375 unit housing Iowa ordnance plant, to Lovering Constr. Co., 389 5 Ave., St. Paul, Minn., **$1,284,219.** CD 4/25—ENR 5/1.

Ia., Burlington—Des Moines Co., county home, to C. A. Nelson, Burlington. **$172,631** ***electrical work, to Pratt Electric Co., Algona, **$6,470*****plumbing, heating, to J. W. Darragh, Cedar Rapids, **$38,649.** CD 6/9—ENR 6/12.

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

★†Ia., **Burlington**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., additional ordnance plant, to Al Johnson Constr. Co., 608 Foshay Tower, Minneapolis, and A. Guthrie & Co., 424 Endicott Bldg., St. Paul. Est. $7,200,000. Day & Zimmerman, Inc., Packard Bldg., Phila., Pa., will operate. CD 6/13—ENR 6/19.

†Ia., **Des Moines**—Con. Q. M., maintenance garage for Civilian Conservation Corps, to Weitz Constr. Co., 713 Mulberry St. $50,000.

Ia., **Graetinger**—Generators for light plant, to Fairbanks-Morse Co., 9 and Harney Sts., Omaha, Neb., approx. $40,000***switchboard, to Schneider Electric Wks., 1108 Farnam St., Omaha, Neb.***power plant, to Spencer Contr. Co., Spencer. Total est. $100,000. Bids 6/10. CD 5/13—ENR 6/15.

†Kan., **Fort Riley**—Con. Q. M., 16 barns, to George Senne & Co., 510 E. 15 St., Topeka. $146,000.

†Ky., **Louisville**—Public Bldgs. Administration, Wash., D. C., 88 units defense housing for workers and families, Bowman Field, Camp Taylor, to Plate Constr. Co., 2506 W. Walnut St. Est. $300,000.

★†La., **Alexandria**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., reception center, motor repair unit, ice dock, veterinary, ward and clinic buildings, theatre, to Pittman Bros. Constr. Co., 2800 N. Galvez St., New Orleans. $1,100,000. Awarded 7/2.

★†La., **Alexandria**—Con. Q. M., Camp Claiborne, 176 recreational buildings, 12 chapels and 13 recreational buildings, to Robert Angelle, Breaux Bridge. $512,000. CD 6/27—ENR 7/3 under LB.

★†La., **Alexandria**—Pub. Bldgs. Administration, Wash., D. C., 225 housing units for army enlisted personnel, to Tudor & Ratcliff and Grovier & Harper, Alexandria. $839,500. CD 3/6—ENR 3/13.

★†La., **Baton Rouge**—Standard Oil Co., N. Baton Rouge, synthetic rubber plant, own forces. $3,500,000. Defense Plant Corp. will finance. CD 6/27—ENR 7/3.

†Mass., **Ayer**—Con. Q. M., Fort Devens, June 25, 4 motor repair shops, oil houses, grease and inspection racks, wash rooms, etc., Items 1 and 1D, to John Bowen Co., 129 Newbury St., Boston, $59,000; Items 1A, 1B, and 1C, to J. Slotnick Co., 38 Newbury St., Boston, $93,714. Bids 6/25.

★†Mass., **Ayer**—Con. Q.M., Fort Devens, maintenance shop, barracks, ware houses, mess halls, day rooms, store house, offices and various utilities, to Matthew Cummings Co., 38 Chauncey St., Boston. $1,181,814, cost-plux-fixed-fee-basis. F. A. Barbour, 1119 Tremont Bldg., Boston, archt. and engr.

†Mass., **Chicopee Falls**—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., troop buildings, Westover Field, to M. J. Walsh & Sons Constr. Co., Shawmut Ave., Holyoke. $200,000. CD 6/17—ENR 6/19.

†Mass., **Falmouth**—Con. Q. M., Camp Edwards, negotiated contract for brick field house, to Leslie R. Porter Co., 126 Park St., Beverly. $78,500. Bids 6/28 rejected. CD 6/26—ENR 7/3.

†Mass., **Marblehead**—U. S. Eng., Park Square Bldg., Boston, 2 story, bsmnt., 30x44 ft., concrete, steel building, Marblehead Neck, to Samuel Glazer, 115 Nichol St., Everett. CD 6/19.

Mich., Alpena—Bd. Educ., high school, remodeling existing building, to Spence Bros., Saginaw. $287,240. Bids 6/20. CD 6/16.

†**Mich., Camp Grayling**—U. S. Property Disbursing Officer, 208 Hollister Bldg., Lansing, commissary warehouse, motor truck storage and service buildings, to P. C. Miller, Sparta. $97,280.

Mich., Grosse Pointe—2 story, bsmnt., brick, steel, rein.-con. school, to F. H. Martin Constr. Co., 955 E. Jefferson Ave., Detroit. Est. $150,000. CD 5/28.

†**Mich., Mount Clemons**—U. S. Eng., Federal Bldg., Detroit, instrument adjustment building, Selfridge Field, to E. F. Eiserman & Son, 827 Farwell Bldg., Detroit. $108,000. CD 6/18.

Mich., Wyandotte—Municipal Serv. Comn., structural steel for 60x90 ft., brick, concrete boiler house for power plant, to Whitehad & Keles Co., 58 Haltiner St., Detroit, $55,272; substructure, to A. J. Dupius, 1812 Ford Bldg., Detroit, $57,500. Bids 6/30. CD 6/16—ENR 6/19.

†**Mo., Jefferson Barracks**—U. S. Eng., 816 U. S. Court House & Custom House, St. Louis, June 24, 4 school buildings, 3 administration buildings, and 1 processing building, from Joseph A. Bass Constr. Co., 332 Sexton Bldg., Minneapolis, Minn. $218,600. Est. $155,000.

†**Mo., Rolla**—Con. Q.M., Fort Leonard Wood, 12 regimental chapels, service clubs, theatre, guest house, gasoline station, officers' quarters, administration building, 3 hospital barracks, to Tulsa Rig, Reel & Mfg. Co., Philtower Bldg., Tulsa. $446,100. CD 5/20-6/2—ENR 5/22 and 6/5.

†**Mo., Rolla**—Con. Q.M., Fort Leonard Wood, service clubs, theatre, guest house, to Tulsa Rig, Reel & Mfg. Co., Philtower Bldg., Tulsa, Okla. $160,300. Bids 6/24. CD 6/10—ENR 6/12.

★†**Mo., St. Louis**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., additional buildings and other facilities for small arms ammunition plant, Goodfellow and Bircher Blvds., to Fruco Constr. Co. and Fruin Colnon Contg. Co., Merchants-Laclede Bldg., St. Louis, and Massman Constr. Co., 20 W. 9 St., Kansas City. Est. $33,990,559. $25,200,000 for machinery and equip.; U. S. Cartridge Co., Baltimore, Md., subsidiary Western Cartridge Co., Alton, Ill., will operate. Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, Mich., A. J. Brandt, Inc., 7300 Woodward St., Detroit, Mich., and Mauran, Russell, Crowell & Mullgardt, Chemical Bldg., St. Louis, Mo., archts. and engrs. CD 6/16—ENR 6/19.

★†**N. J., Dover**—Con. Q.M., 120 Wall St., New York, N. Y., rounding out facilities, etc., Picatinny Arsenal, to Frank Briscoe Co., Inc., 287 S. 19 St., Newark. $508,140. CD 6/25—ENR 7/3.

†**N. J., Eatontown**—War Dept., 20 St. and Constitution Ave. N.W., Wash., D. C., 17 frame barrack buildings for Signal Corp., Fort Monmouth, to Wigton-Abbott Corp. and Tuller Constr. Co., 1225 South Ave., Plainfield. $283,000.

†**N. J., Fort Dix**—Con. Q.M., housing facilities for anti tank battalion for 44th Div., from Andrew Christensen, 80 Broad St., Elizabeth, and A. A. LaFountain, 161 Beech St., Hackensack. $208,934.

†**N. J., Fort Dix**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., frame barracks for housing facilities in recruit reception center, from J. A. J. Constr. Co., 270 41 St., Brooklyn, N. Y. $449,200.

†**N. J., Pedrickton**—Con. Q.M., June 27, combination garage, roundhouse, firehouse and guardhouse, from Edward Fay & Co., 244 North 5 St., Phila., Pa. $123,700.

★†**N. Y., North Hempstead**—Sperry Gyroscope Co., Inc., 40 Flatbush Ave. Ext., Brooklyn, 1 story factory and 3 story administration building, to Stone & Webster, Eng. Corp., 90 Broad St., New York City. Total est. $20,281,001. Defense Plant Corp. will finance.

★†**N. C., Wilmington** — Con. Q.M., Camp Davis, 1 field house, 8 chapels, service club for negroes, day rooms, red cross building, guest house, hospital, administration, ice plant, radio transmitting building, to F. N. Thompson, 145 Brevard Court, Charlotte. $794,594. CD 6/17, 6/26 and 7/1—ENR 6/19. 7/3.

★†**O., Camp Perry**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 1,000 man reception center, to John Gill and Sons Inc. & Assoc., Bulkley Bldg., Cleveland. $752,739. Garfield, Harris, Robinson & Schafer, Natl. City Bank Bldg., Cleveland, archts. and engrs.

★†**O., Hamilton**—General Machy. Corp., N. 3 St., general contract factory for Navy Dpt., 18 St., and Constitution Ave. N.W., Wash., D. C., to A. Benzing & Sons, 709 S. 9 St. Est. $850,000. Total $1,499,000. CD 4/17—ENR 4/18, under CA.

★†**O., Sandusky**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., construction (additional), engineering and architectural services for TNT and DNT plant, Plum Brook, to E. B. Badger & Sons Co., 75 Pitts St., Boston, Mass. $9,252,911. Trojan Powder Co., Hunicker Bldg., Allentown, Pa., will operate. Awarded 7/1. CD 6/16—ENR 6/19.

★†**Okla., Fort Sill**—Con. Q.M., temporary cantonment, tent camp, to J. W. Bateson, Austin, Item 1, $1,488,000. Est. $1,000,000. CD 12/11—ENR 12/19.

★†**Ore., Hermiston**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., ammunition storage, magazines, shelters, transfer platforms, etc., Umatilla Ordnance Depot, to J. A. Terteling & Sons, Robert Noble Bldg., Boise, Idaho, and Stevens & Koon, Spalding Bldg., Portland. $3,145,841.

†**Pa., Indiantown Gap**—Con. Q.M., ordnance shop, boiler house, to Marshall Co., Dover, O., $56,640. Bids 6/5. CD 5/29.

†**Pa., New Cumberland**—Con. Q.M., New Cumberland General Depot, May 15, clothing renovation plant, to H. B. Alexander, 3 and Vaughn Sts., Harrisburg. $235,450. CD 5/6—ENR 5/8.

★†**Pa., Turtle Creek**—Federal Works Agency, Wash., D. C., defense housing, 150 buildings, Pa. 35121X, to W. F. Trimble & Sons Co., 1719 Pennsylvania Ave. N.S., Pittsburgh. $2,353,000. CD 6/24.

★†**Tenn., Milan**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., design and construction ammunition storage depot, magazines, shelters, buildings, utilities, Wolf Creek Ordnance Plant and Milan Storage Depot, to H. K. Ferguson Co., Hanna Bldg., Cleveland, O., and Oman Constr. Co., Acklen Park, Nashville. Est. $10,791,950. Procter & Gamble, Gwynne Bldg., Cincinnati, O., will operate. CD 6/27—ENR 7/3, under CA.

★†**Tex., Abilene**—Con. Q. M., Camp Barkeley, 13 hospital wards and 9 infirmaries, etc., to J. T. Taylor, 1st Natl. Bank Bldg., Fort Worth. $992,000. CD 7/1, under LB.

Tex., Beaumont—Lamar College, c/o J. M. Combs, pres., 2 story, 65x230 ft., brick science building, to Winter King Co., San Jacinto Life Bldg. $157,749. Bids 6/27. CD 6/23.

★†**Tex., Fort Bliss**—Con. Q.M., 10 motor repair shops, 4 grease and inspection racks, 4 oil houses, 4 wash racks, 5 post headquarters buildings, also 48 emergency buildings for miscellaneous use, to J. E. Morgan & Sons, 210 N. Campbell St., El Paso. $1,025,000. Bids 6/24, awarded 6/30. CD 7/1.

Tex., Freeport—Bd. Educ., Freeport, c/o O. A. Flemming, supt., 1 story, 28x421 ft. and 28x290 ft. steel, concrete, brick school, to L. Linbeck, 3940 Main St., Houston. $150,000. A. B. Dow, Freeport, archt.

Tex., Freer—Freer Public School Dist., 1 story, hollow tile, stucco mechanical training, bus storage, mechanical repair shop, to C. C. Fowler, Alice. $48,600. CD 5/28—ENR 6/5, under CA.

†**Tex., Galveston**—Con. Q.M., Fort Crockett, 1 story motor repair shops and garage, to Adolph Johnson, Ave. F and 23 St. $82,000. Awarded 6/30.

†**Tex., Mineral Wells**—Con. Q.M., Mineral Wells, 15 miscellaneous buildings, Camp Wolters, to P. O'B. Montgomery, 913 S. Akard St., Dallas. $181,890.

★†**Tex., Mineral Wells**—Con. Q.M., Camp Wolters, reception center, 36 mobilization buildings, to P. O'B. Montgomery, 923 South Akard St., Dallas. $532,000. Bids 6/17, awarded 6/24. CD 6/16.

†**Tex., Palacios**—Con. Q.M., Camp Hulen, ten 1 story buildings, 6 officers' day rooms, 1 officers' mess, 1 radio shelter, 2 signal comm. schools, to Steele & Co., Inc., 1st Natl. Bank Bldg., Houston. $159,000.

†**Tex., San Antonio**—U. S. Eng., Duncan Field, forty-five 1 and 2 story, frame buildings for Navigation Training School, Kelly Field, to Thomas Bate & Son, 1107 Girard Ave., Houston. $498,152. Bids 6/27. CD 6/16—ENR 6/19.

★†**Tex., San Antonio**—U. S. Eng., Federal Bldg., Galveston, cadet replacement project, barracks, mess halls, school buildings, utilities, to Christy & Basket, Builders Exch. Bldg., $707,160. Bids 6/6, awarded 6/30. CD 5/15—ENR 5/22.

†**Tex., San Antonio**—Con. Q. M., San Antonio, building addns., and heating sys. in existing buildings, San Antonio Arsenal, to Gilbert Falbo Co., 735 Bandera St. $216,207.

†**Tex., San Antonio**—Con. Q. M., Fort Sam Houston, 24 buildings for facilities, school for training motor mechanics, to A. P. Rheiner & Co., c/o Builders Exch. $218,169. Awarded 6/30.

†**Tex., San Antonio**—Con. Q. M., Fort Sam Houston, motor maintenance project, 4 motor repair shops, wash racks, greasing and inspection racks, oil storage houses, pump house, etc., to W. J. Aldrich, 229 Palm Dr. $135,924. Est. $100,000. CD 6/5—ENR 6/12.

†**Tex., San Antonio**—U. S. Santa Fe Bldg., Galveston, 11 barracks, 2 officers quarters, 3 day rooms, 2 mess halls, 3 supply buildings, utilities, to Ed. W. Oeffinger, 701 Ave. A. $259,688.

★†**Tex., Texarkana**—War Dpt., 20 St. and Constitution Ave. N. W., Wash., D. C., ammunition storage depot, roads, magazines, loading platforms, shelters, railroads, etc., to Brown & Root, Inc., 4300 Calhoun Rd., Houston, $9,411,827. Gieb, Laroche, Dahl & Chappell, Mercantile Bldg., Dallas, Archts. and Engrs. CD 6/24—ENR 6/26.

★†**Tex., Waco** and **El Paso**—Con. Q.M., 1819 W. Pershing Rd., Chicago, Ill., prefabricated buildings, various C.C.C. points, to Green Uumber Co., Laurel, Miss., $674,070, and King & Boozer, Anniston, Ala., $569,269.

★†**Utah, Ogden**—Con. Q.M., to Peter Kiewit Sons Co., 1024 Omaha Natl. Bank Bldg., Omaha, Neb., Olson Constr. Co., 410 S. 7 St., Lincoln, Neb., and Dodson & Robinson, 823 1st Natl. Bank Bldg., Lincoln, Neb., 1 North shell loading plant, 1 West fuse loading plant, 1 primer loading plant, etc. $2,305,000. 1 m. g. rein.-con. reservoir $45,000, all at 37 MM shell loading plant, Ogden Ordnance Depot. Bids 6/24. CD 6/20.

†**Utah, Ogden**—Con. Q.M., clothing renovating plant, power house, pump house and transformer station, to James I. Barnes Constr. Co., Builders Exch. Bldg., Santa Monica, Calif. $369,000.

†**Utah, Ogden**—Con. Q. M., Ogden Ordnance Depot, administration building and sentry house, 37mm Shell Loading Plant, to James I. Barnes Constr. Co., Santa Monica, Calif. $229,000. Bids 6/24.

†**Utah, Ogden**—Con. Q.M., Ordnance Depot, administration, fire, and guard building, to Jacobsen Constr. Co., 724 S. 3 East St., Salt Lake City. $243,640. Bids 6/24.

†**Utah, Ogden**—U. S. Eng., 751 S. Figueroa St., Los Angeles, Calif., armament and fire control building, Hill Field, to James I. Barnes Constr. Co., Builders Exch. Bldg., Santa Monica, Calif. $132,430. Bids 6/25. CD 6/19.

★†**Utah, Ogden**—Con. Q.M., Ogden Ordnance Depot, Ogden, 2 concrete, brick warehouses, Ordnance Depot, to Geo. A. Whitmeyer & Sons, 2759 Grant Ave. $516,990. Est. $500,000. Bids 7/2.

Utah, Springville—Hydro-electric municipal power plant, incl. 6 mi. pipe line. WPA. $374,-203. H. Price, Provo, engr.

†**Vt., Fort Ethan Allen**—Con. Q. M., motor repair shops, grease racks, oil houses, etc., Fort Ethan Allen Army Encampment, to Carilli Constr. Co., 281 Adams St., Dorchester, Mass. $85,792.

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

★†**Va., Fort Belvoir**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., plant and housing addns., chapels, recreation facilities, storage and vehicle sheds, road and lighting sys., etc., to Charles H. Tompkins Co., 907 16 Ave. N.W., Wash., D. C. **$3,599,806.**

†**Wash., Bremerton**—Puget Sound Navy Yard, warehouses and magazines, Naval Ammunition Depot, near here, Spec. 10382, to Hoard & Stingl, 1331 Third Ave. Bldg., Seattle. **$168,786.** Bids 6/28.

★†**Wash., Bremerton** — Puget Sound Navy Yard, 7 story, rein.-con. warehouse, Oyster Bay Ammunition Depot, near here, to Howard S Wright & Co., 407 Yale Ave. N., Seattle, and L. H. Hoffman, 715 S.W. Columbia St., Portland, Ore. **$2,194,550.** Bids 6/26. CD 6/30—ENR 7/3.

★†**Wash., Seattle**—War Dpt., 20 St. and Constitution Ave. N.W., Wash., D. C., 45 buildings for port of embarkation service center, Fort Lawton, to Sound Constr. & Eng. Co., Northern Life Tower. **$827,000.** CD 6/30—ENR 7/3.

★†**Wyo., Fort Francis E. Warren**—War Dpt., 20 St. and Constitution Ave. N. W., Wash., D. C., additional replacement center facilities, 70 additional buildings, to N. G. Petry, Denham Bldg., Denver, Colo., and P. S. Cook Plumbing Co., 1722 Thomas Ave., Cheyenne, **$1,032,758.** W. W. Flora, Cheyenne, Archt. and Engr.

Wyo., Jackson—State Hy. Comn., Cheyenne, shop and storage, to C. Schmerer, Cody. **$43,463.** F. Kelso, state hy. supt.

Wyo., Lusk—E. F. Deuel, clk., building alterations, generating unit, cooling sys., to Fairbanks-Morse & Co., 9 and Harney Sts., Omaha, Neb. **$52,630.** CD 4/30—ENR 5/15.

†**Alaska**—Civil Aeronautics Auth., Commerce Bldg., Wash., D. C., utility, transmitter and generator buildings at Nome, West Ruby, Big Delta, Boundary, Cordova and Anchorage airports, to Pre-Fabricated Products, Inc., Lloyd Bldg., Seattle, Wash. **$74,780.**

COMMERCIAL BUILDINGS

PROPOSED WORK

Mo., Springfield—St. John's Hospital, Main and Scott Sts., soon lets contract hospital addn. $200,000. Johnson & Robinette, Landers Bldg., archts. CD 6/24—ENR 6/26.

N. Y., New York—Trinity Operating Co., Inc., 74 Trinity Pl., soon lets contract renovating office, 76-84 Warren St. $150,000.

BIDS ASKED

Bids Asked July 22

Pa., Washington—P. C. Dowler, archt., 803 Century Bldg., Pittsburgh, (invitation only) 3 story, 42x86 ft. hospital addn. 3 story 84x180 ft. nurses home, for Washington Hospital, W. E. Barron, supt., Washington. $200,000. CD 1/2—ENR 1/9.

Bids Asked About August 1

Pa., Topton—Richter & Eiler, archts., 147 N. 5 St., Reading, 2 story, bsmnt., brick, steel, concrete orphanage, for Lutheran Orphanage, Topton. $200,000. Tentative date. CD 6/30—ENR 7/3.

Bids Asked

Ky., Covington—F. W. Woolworth, c/o T. B. Owens, engr., Leader Bldg., Cleveland, O., 3 story, brick, steel store. $200,000. CD 4/4—ENR 4/17.

Pa., Greenville—J. Martsolf, archt. Beaver Falls, superstructure, incl. stone, brick work for dormitory at college, for Bd. Trustees Thiel College, Meadville.

LOW BIDDERS

Que., Three Rivers — Confederation Life Assn., 132 St. James St. W., Montreal, 30 houses, from A. Sevigny, 777 St. Rock St. About **$235,000.**

CONTRACTS AWARDED

Calif., San Francisco—O. M. Oyen, 50 Castenada Ave., 1 story, wood frame home building projects, Sunset and Richmond Dists., day labor. Over **$150,000.**

Calif., San Francisco—M. Desiano, 2453 Lombard St., 1 story, bsmnt., wood frame homes, Sunset and Parkside Areas, day labor. Over **$150,000.** H. C. Baumann, 251 Kearny St., archt.

Conn., Stratford—Walter Johansick & Sons, 54 Manhattan Ave., Bridgeport, 30 residences, Winfield Project, W. Broad St. Owner builds. **$175,000.** FHA.

Mass., Milford—Sacred Heart of Jesus, J. J. Valentine, pastor, 5 E. Main St., 1 story, bsmnt., 60x200 ft., brick, limestone church, to J. Canobianco, 44 School St., Boston. **$165,000.** Est. $160,000. Bids 6/11. CD 6/11—ENR 6/26.

Mo., Clayton (St. Louis P. O.)—E. W. Francis, et al, c/o E. W. Francis & Co., 7610 Delmar St., University City, St. Louis, five 1 story, brick, concrete shop buildings, on 120x460 ft. track, 8100 block Maryland Ave. (Ladue Rd.) to W. A. Beck & Co., 2 Ladue Hills, St. Louis County. **$200,000.** W. Theodor, 2754 Accomac St., St. Louis, archt.

N. J., Bogota—Melina and Borea, 648 Cooper Ave., Oradell, 2 story, Colonial Gardens Apartments, Queen Anne Rd. Owner builds. **$180,000.** CD 4/9—ENR 4/17.

N. J., Rutherford—Jackson Village, c/o M. Goldfarb, 17 Delafield Ave., 2½ story, bsmnt., frame, garden type apartments, Jackson Ave., separate contracts. **$150,000.** G. K. Wheeler, 162 Mountain Way, archt.

★**N. Y., Bellmore**—Air Way Homes, Inc., 39 Bway., New York, Maplewood Estates, residential development. First group comprising 115 homes (ultimately 1,000 homes), separate contracts. **$575,000,** 1st group, ultimately **$4,500,000.**

N. Y., Bronxville — Lawrence Properties, Inc., Alger Court, 2 apartment houses. Owner builds. **$302,000.**

N. Y., Brooklyn—Hampshore Arms, Inc., 2027 E. 37 St., 6 story apartment, 575 E. 19th St., separate contracts. **$425,000.** Seelig & Finkelstein, 153 Pierrepont St., archts. CD 6/26—ENR 7/3.

N. Y., Brooklyn—N. Sokolow, 667 Crown St., 6 story, 133x160 ft. apartment, 1814 E. 15 St., separate contracts. **$382,000.** Kavy & Kavovitt, 44 Court St., archts. CD 6/24—ENR 6/26.

N. Y., Buffalo—F. H. Arber & Son, 1168 Seneca St., residences. Owner builds. **$200,000.**

N. Y., Flushing—M. and P. Homes, Inc., 183-11 73 Ave., 41 homes, 69 Ave. and 183 St. Owner builds. **$161,500.** D. J. Levinson, 163-18 Jamaica Ave., Jamaica, archt.

N. Y., Flushing—Merit Homes, 40-09 39 St., Woodside, 39 one family homes, 147 St. Owner builds. **$156,000.** A. H. Salkowitz, 37-60 82 St., Jackson Heights, archt.

★**N. Y., Garden City**—Country Club Homes, W. A. Sullivan, pres., two hundred 1 family homes, first group comprises 18 dwellings, New Hyde Park Rd. Owner builds. **$153,000,** ultimately **$1,700,000.**

N. Y., Jamaica — Kessler Associates, Inc., 163-18 Jamaica Ave., 28 homes, 76 and 77 Aves. Owner builds. **$150,000.** A. E. Allen, 90-04 161 St., archt.

N. Y., Lackawanna — Queen City Housing Corp., 238 Main St., Buffalo, residential construction, to Merrill Constr. Co., 1377 Main St., Buffalo. Over **$150,000.**

N. Y., New York—Continental Apartments, Inc., 909 Sheridan Ave., New York, 6 story, 84x137 ft. apartment 141-7 Bennett Ave., separate contracts. **$240,000.** CD 7/1.

N. Y., New York—Continental Apartments, Inc., 909 Sheridan Ave., 6 story, 84x145 ft. apartment, 149-61 Bennett Ave., separate contracts. **$260,000.** CD 7/1.

★**N. Y., Rochester**—St. Mary's Hospital, 909 W. Main St., hospital, to D. J. Meagher, 311 Alexander St. Est. **$500,000.** J. P. Flynn, 154 East Ave., archt.

N. D., Richardton — Richardton Abbey, 4 story, 150x240 ft. college, day labor. **$200,000.** W. F. Kurke, Fargo, archt.

O., Canton—H. H. Timken Estate, c/o L. J. Motter, archt., 1342 Cleveland Ave. N.W., office and commercial building Market and Tuscarawas Sts. N.W., to Gibbons-Grable Co., Mellet Bldg. **$150,000.** Awarded 6/28. CD 5/19—ENR 5/22.

O., Warren—St. Josephs Hospital, 3 story, brick, steel, concrete hospital addn., to W. B. Gibson Co., Warren. **$150,000.**

Pa., Hellertown—Sears, Roebuck & Co., c/o M. C. Juell, mgr. in charge, 61 dwellings, separate contracts. **$250,000-$300,000.** CD 6/19—ENR 6/26.

Pa., Mt. Lebanon (br. Pittsburgh) — Don Ranallo Co., 4805 Liberty Ave., Pittsburgh, 25 two story, bsmnt., 28x36 ft., brick veneer residences, separate contracts. **$250,000.**

★**Pa., Woodlynne**—Grace Park Co., Woodlynne, 300 residences, Ridley Twp., near here. Owner builds. **$1,200,000.**

Tex., Dallas—Messerle Bros., c/o Greenway Shopping Center, University Blvd. and Inwood Rd., 1 story, brick, concrete shopping center unit, force account. **$150,000.**

Tex., San Antonio—Geo. M. Holmes & Co., c/o Greenlawn Estates, 144 one story dwellings, force account, sub-contract, etc. **$400,000.**

Wash., Seattle—Pacific Constr. Co., 8100 35 Ave. S.W., 60 houses 21 Ave. S.W. near W. Roxbury St., day labor. **$150,000.** CD 5/28—ENR 6/5.

★**Wis., Milwaukee**—W.T.M.J., 333 W. State St., general contract 1 story, 114x170x282 ft., brick, rein.-con. radio building, E. Capitol Dr., to Dahlman Constr. Co., P. O. Box 1184. Est. **$500,000.** Eschweiler & Eschweiller, 720 E. Mason St., archts.

INDUSTRIAL BUILDINGS

PROPOSED WORK

★**Ind., Fort Wayne**—PLANT—General Electric Co., Fort Wayne Works, S. Bway., new plant to manufacture turbo superchargers. $500,000 or more with equip.

★**La., Homer**—GENERATING PLANT, etc. —Ark-La. Electric Co-operative, Homer, La., 10,000 kw. generating plant and transmission sys. to supply electric current for defense plants and farmers [illegible] Louisiana and southern Arkansas $2,864,000

N. J., Clifton and Nutley—CHEMICAL—Feilheimer & Wagner, archts., 15[illegible] E. 42 St., New York, N. Y., soon lets contract three 2 story 2½ story, bsmnt., brick, steel chemical manufacturing buildings, Kingsland Ro[illegible] for Hoffman LaRoche, Inc., Kingsland Rd., Nutley CD 6/23—ENR 6/26.

★**N. Y., Buffalo**—SHIPBUILDING PLANT—Niagara Ship Building Corp., [illegible] Washington St., ship building plant. $400,000-$500,000

N. Y., Hollis—GARAGE—New York Telephone Co., 140 West St., New York, plans by E. J. Koster, c/o owner, 1 story garage and office, 99-23 199 St. $40,000.

N. Y., Jamaica—STORAGE WAREHOUSE, etc.—W. Dorf, 178-01 Liberty Ave., plans by J. H. Burmeister, 155-31 Jamaica Ave., 1 story, storage warehouse and office, 178-[illegible] Liberty Ave. $70,000.

N. Y., Jamestown—SALES AND SERVICE—Buskist Nash Sales & Service, 2100 Washington St., 1 story, part bsmnt., brick, steel, concrete automotive sales and service building E. 2 St. $40,000 with equip.

N. Y., Lockport—PLANT—Harrison Radiator Corp., Washburn St., plans by J. M. Tully Bewley Bldg., plant addn. $50,000.

N. Y., Niagara Falls — PLANT — Niacet Chemical Co., Pine Ave. and 47 St., rebuilding portion vanyl-acetate plant. Over $40,000.

O., Cleveland — FACTORY, etc. — Jack & Heintz, Inc., c/o W. Jack, Hanna Bldg., soon lets contract 1 story, 210x300 ft. factory, 40x90 ft. boiler house, brick, steel. $200,000. W. Watson & Assoc., 4614 Prospect Ave., engrs. CD 5/7—ENR 5/15.

O., Cleveland—FACTORY—Hertner Electric Co., J. H. Hertner, pres., 12690 Elmwood St., soon lets contract 1 story, 32x60 ft. and 1 story, 60x240 ft. factory addns. $60,000. W. G. Caldwell, Engineers Bldg., archt. CD 1/21—ENR 1/23.

O., Cleveland—FACTORY—Cleveland Chain & Mfg. Co., D. L. Round, pres., Bway. and Henry Sts., soon lets contract 1 story, 40x81 ft. and 2 story, 40x60 ft., brick, steel factory bldgs. $40,000. E. B. Hoefler, 5005 Euclid Ave., engr. CD 6/19—ENR 6/26.

Pa., Erie — POWER PLANT — Erie County Electric Co., D. W. Jardine, pres. and gen. mgr., 12 and French Sts., brick, steel power plant addn., imprvs., W. 5 and Cranberry Sts. United Engineers & Constructors, Inc., 1401 Arch St., Phila., engrs.

★**Pa., Trafford City**—FOUNDRY—Westinghouse Electric & Mfg. Co., East Pittsburgh, 2 single story, brick, steel foundry addns., 3 single story manufacturing building addns. Approx. $500,000. CD 5/21—ENR 5/29, under CA.

Pa., Washington—WAREHOUSE—Duncan & Miller Glass Co., 655 Jefferson Ave., sketches by S. L. Beall, 601 Washington Tr. Bldg., brick on hollow tile warehouse.

Tenn., Memphis—LOCKER—American Finishing Co., Bodley Ave., locker building. $40,000. E. L. Harrison, 81 Madison Bldg., archt.

★**Tenn., Nashville**—GENERATING PLANT—Rural Electric Administration, Nashville, steam generating plant, 15,000 kw. capacity, in East Tennessee, $1,500,000; 10,000 kw. steam plant in West Tennessee, $1,000,000

Tex., Fort Worth — REFINERY — Premier Oil & Refining Co., Longview, refinery plant imprvs., expansion, near here. $125,000.

Tex., Pasadena—PLANT—Owen Tool Co., Pasadena, tool plant. $40,000.

★**Tex., Port Arthur**—PLANT—Texas Steel Co., 3901 Hemphill St., Fort Worth, steel mill, rolling plant, warehouses, shops, etc. $500,000.

Tex., Sherman—PLANT—Interstate Oil Refining Co., c/o A. C. Hopkins, Sherman, bids soon 2 story, 115x183 ft. structural steel warehouse. $60,000. J. R. Grady, M & P Bank Bldg., archt.

Wash., Spokane—PLANT—Reynolds Metals Co., 7 and Bainbridge Sts., Richmond, Va., aluminum plant 85,000,000 lb. annually. Over $40,000.

★**Wis., West Allis**—PLANT—Allis Chalmers Mfg. Co., 1120 S. 70 St., manufacturing plant, addn. $12,000,000. C. E. Meyer, c/o owner, engr.

★**B. C., Port Alberni**—MILL—Alberni-Pacific Lumber Co. Ltd., 837 W. Hastings St., Vancouver, plywood mill. $500,000.

BIDS ASKED

Conn., Ansonia — FACTORY — Farrell-Birmingham Co., Inc., 30 Main St., 2 story, brick, steel, concrete factory addn. incl. office. Over $40,000. L. F. Caproni, 1221 Chapel St., New Haven, engr.

Ill., Chicago—GRAIN ELEVATOR—Columbia Malting Co., 141 W. Jackson Blvd., grain elevator, 105 St. Over $250,000.

N. Y., Niagara Falls—PLANT—Frontier Bronze Corp., Elmwood Ave., plant addn. $50,000. W. A. Cannon, 2637 Main St., archt. CD 6/30—ENR 7/3.

Pa., Plymouth—PLANT—Owner, c/o Wyoming Valley Industrial Com,. Wilkes-Barre, 1 story, textile products plant, site of old West stocking mill. $40,000. CD 6/24—ENR 6/26

Pa., Wilkes-Barre—WAREHOUSE—T. C. Thomas, 155 S. Pennsylvania Ave., 1 story

INDUSTRIAL BLDGS. (Bids Asked, Cont'd.)

80x120 ft., bsmnt., brick, steel concrete warehouse, $75,000. CD 6/26—ENR 7/3.

Ont., Belleville—FACTORY—Deacon Shirt Co. Ltd., W. B. Deacon, pres., 311 Front St., factory, Dundas St. E. $40,000. E. A. Cross, 991 Bay St., Toronto, archt. CD 8/8—ENR 8/15.

CONTRACTS AWARDED

Conn., Bridgeport—FACTORY—U. S. Aluminum Co., 2190 Post Rd., Fairfield, altering 2 factory buildings, South Ave., constructing machinery fdns., renovation work for making magnesium products, to Edwin Moss & Son, 555 Grant St. **$100,000.**

Conn., Bridgeport—FACTORY—Auto-Ordinance Corp., 1437 Railroad Ave., altering, constructing 2 story, 60x78 ft., brick, steel, factory addn., concrete fdn., to Edward E. Bray Co., 362 River St. Est. **$40,000.** CD 6/17—ENR 6/19.

Conn., Bridgeport—GARAGE—Hoffman Fuel Co., 156 E. Washington Ave., 1 story, 80x200 ft., brick, steel, concrete garage, maintenance facilities, to DeFonce Constr. Co., 51 Hurd Ave. Est. **$50,000.** CD 5/21—ENR 5/29.

Conn., Middlefield—FACTORY—Lyman Gun Site Corp., 3 story, 45x68 ft., brick factory, to H. Wales Lines Co., 134 State St., Meriden. Est. **$40,000.**

Conn., Putnam—FACTORY—Owner, c/o L. F. Caproni, engr., 1221 Chapel St., New Haven, 1 story, 85x160 ft., brick, steel factory, to Wright & Morrison, Plattsburg, N. Y. **$40,000.** CD 4/30—ENR 5/8.

★**Fla., Tampa**—STEAM POWER PLANT—Tampa Electric Co., Tampa and Cass Sts., Tampa, expanding steam power plant, own forces. **$1,750,000.**

Ga., Monroe—PLANT—Monroe Cotton Mills, 3 story, 55x220 ft., brick, steel, c.i. plant addn., to Henry B. McKoy Co., Greenville, S. C. Total est. **$67,000.** J. E. Sirrine & Co., Greenville, S. C., consult. engrs.

Ill., Chicago—PLANT—Chicago Rotoprint Co., 4601 Belmont Ave., 2 story printing plant addn. 4601 Belmont Ave. separate contracts. **$50,000.** E. P. Sternberg, 205 W. Wacker Dr., archts.

Ill., Chicago—PLANT—Lloyd Harriss Pie Co., 849 W. Ohio St., 1, 2 and 3 story baking plant addn. to Schless Constr. Co., 236 N. Clark St. Est. **$70,000.** C. J. Kastrup, Forest Park, archt.

Ill., Chicago—FACTORY—Raulard Corp., 3333 Belmont Ave., 175x234 ft. radio parts factory, 4245 Knox Ave., to Clearing Industrial District, Inc., 38 S. Dearborn St. Est. **$115,000.** J. S. Cromelin, c/o contractor, archt.

Ill., Chicago—GARAGE, etc.—Sears, Roebuck & Co., Homan and Arthington Sts., Chicago, 1 story, 120x175 ft. garage and super service station, 62 St. and Western Ave., to W. J. Lynch Co., 208 LaSalle St. Est. **$75,000.** J. S. Redden, c/o owner, archt.

Ia., Sioux City—POWER PLANT—Sioux City Gas & Electric Co., 517 5th Ave., Sioux City, imprv. power plant, brick smokestack, day labor. **$45,000.**

Md., Ellicott City — FACTORY — Baltimore Properties, Inc., 317 E. Balto St., Baltimore, rebuilding 2 and 3 story, 110x300 ft., rein.-con., brick factory, incl. new machine shop and warehouse, to Consolidated Eng. Co., 20 E. Franklin St., Baltimore. Est. **$200,000.** Doughnut Corp. of America, c/o owners, lessee. CD 6/13—ENR 6/19.

Mass., Springfield — LABORATORY — Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., reconstructing single story brick, steel laboratory, East Springfield, near here, separate contracts. Approx. **$125,000.**

Mass., Worcester—LAUNDRY—Owner, c/o contractor, altering brick, steel building, 266 Franklin St. into laundry, to M. J. Dyer & Co., 58 Front St. **$45,000.**

Mass., Worcester — MANUFACTURING — Arter Grinding Machine Co., 15 Sagamore Rd., 1 story, 90x100 ft., brick, steel, concrete machine manufacturing building, Sagamore Rd., to E. Whitehead, Inc., 97 Union St. Over **$40,000** with equip.

Mich., Detroit—OIL RECOVERY—Packard Motor Car Co., E. Grand Blvd., Detroit, brick, steel, rein.-con. chip salvage and oil recovery building, to Barton Malow Co., 1900 E. Jefferson Ave. Est. **$40,000.** Giffels & Vallet, 1000 Marquette Bldg., engrs.

Minn., St. Paul — GARAGE — Merchants Motor Freight Co., S. L. Wasie, pres., 2234 University Ave., 1 story, bsmnt., 160x190 ft. truck terminal 1 story, bsmnt., 52x128 ft. garage, 1 story, 90x100 ft. office, all brick, tile, steel trusses, etc., Territorial Rd. near Berry Ave. to Builders' Co., 513 Guardian Bldg. Est. **$50,000** to **$75,000.** Bard & Vanderlip, 717 National Bldg., Minneapolis, archts.

Neb., Omaha—PLANT—Socony-Vacuum Oil Co., Federal Reserve Bldg., Kansas City, Mo., lubricating oil compounding plant, to Fred Berglund, 6510 Ames Ave. Est. **$500,000.** CD 6/19—ENR 6/26.

N. J., East Rutherford — WAREHOUSE — Beckley Realty Co., Inc. of Ridgewood, 513 Paterson Ave., 1 story, 50x140 ft. brick, steel warehouse, Paterson Ave., separate contracts. **$40,000.**

N. J., Hoboken—SHIPPING—Sweets Co. of America 1515 Willow Ave., 3 story, bsmnt., brick, steel shipping building, to F. J. Brotherton, Inc., 20 Main St., Hackensack. Est. **$100,000.** CD 5/12.

N. J., Jersey City — STORAGE — Whitlock Cordage Co., foot of Lafayette St., 1 story, 50x132 ft. brick, steel storage building, Lafayette Ave., to Samworth-Hughes Co., 177 VanHouston St., Paterson. Over **$40,000.**

N. J., Perth Amboy — FACTORY — Moser Jewel Co., 367 Divison St., 2 story, bsmnt., 85x180 ft. rein.-con. factory Fayette St., to F. & C. Haerter, 6507 Dewey Ave., West New York. **$50,000.** CD 5/12—ENR 5/15.

N. J., Summit — FACTORY — Pulverizing Mchy. Co., 120 Valley Rd., Roselle Park, 1 and 2 story bsmnt., 100x200 ft. brick, steel factory, Chatham Rd., to Adams-Faber Co., 241 Lorraine Ave., Upper Montclair.

N. J., Woodbridge—LABORATORY—Metal & Thermit Corp., 120 Bway., New York, N. Y., 1 story, brick, steel laboratory, to Andrew Christensen & Son, Inc., 1140 E. Jersey St., Elizabeth. **$115,000.** C. G. Preis, 230 Park Ave., New York, N. Y., archt.

N. Y., Buffalo—PLANT—Hewitt Rubber Corp., 240 Kensington Ave., 1 and 2 story, 47x118 ft. and 28x40 ft., plant addns., to Shirley Herman Co., Elmwood Ave. Est. **$45,000.** H. E. Plumer & Associates, 775 Main St., engrs.

N. Y., Buffalo—FACTORY—Wildroot Co., Inc., Jefferson Ave., 1 story, 50x100 ft. and 25x50 ft. factory, to John Feist Constr. Corp., Norwood Ave. Est. **$40,000** with equip. W. T. Spann, Donaldson Rd., archt. and engr.

N. Y., Falconer—WAREHOUSE—G. L. F. Service, Inc., M. Aikin, in charge, E. Everett St., warehouse, store and distr. center, separate contracts. **$40,000** with equip. CD 6/23—ENR 6/26.

N. Y., Forest Hills—GARAGE—John Dair & C. Smith, 9 Bayview Ave., Manhasset, 1 story garage, 63-44 Austin St. Owner builds. **$40,000.** Lama & Proskauer, 383 Pearl St., Brooklyn, archts. CD 6/11—ENR 6/19.

N. Y., Jamestown — PLANT — Dahlstrom Metallic Door Co., 443 Buffalo St., 1 story, 74x123 ft., brick, steel, concrete plant addn., to G. Olson, 311 Lincoln St., Est. over **$40,000** with equip. Beck & Tinkham, Bailey Bldg., archts.

N. Y., Olean—FACTORY—Clark Bros. Co., Lincoln Ave., 100x200 ft. factory to H. K. Ferguson Co., 25 W. 43 St., New York. **$50,000.**

N. Y., Schenectady—ASSEMBLY, etc.—General Realty Corp., River Rd., 2 assembly buildings and office, separate contracts. **$400,000.** J. G. White Eng. Corp., 80 Broad St., New York, engrs.

★**N. Y., Tahawus**—PLANT—Titanium Pigment Corp., 111 Bway., New York, titanium plant, incl. complete housing facilities, sewers, water lines, etc., near here to Wigton-Abbott Corp., 1227 South Ave., Plainfield, N. J. **$6,000,000.** A. E. Wheeler, 25 Bway., New York, engr.

N. Y., Woodside (Sta. Flushing)—GARAGE—Wilgate Holding Corp., 39-01 Main St., Flushing, 1 story, garage and auto repair shop, to J. Roseto, 189-47 43 Rd., Auburndale. Est. **$40,000.** CD 6/9—ENR 6/12.

N. C., Charlotte—SERVICE STATION—International Harvester, 108 N. Michigan Ave., Chicago, Ill., branch house and service station, to V. P. Loftis, Builders Bldg. **$232,000.** CD 6/12—ENR 6/19.

O., Cleveland — FACTORY — Addressograph Multigraph Co., 1200 Babbitt Rd., 1 story, 120x160 ft., brick, steel, factory addn., to H. K. Ferguson Co., Hanna Bldg. Est. **$150,000.** Awarded 7/1.

O., Cleveland—FACTORY — Broden Constr. Co., G. A. Broden, pres., 22800 Lakeland Ave., 1 story, 60x140 ft., brick, steel factory, to Alger-Rau, Inc., 12434 Cedar Rd. Est. **$40,000.** CD 1/29—ENR 2/6.

O., Cleveland—FACTORY—Cleveland Hobbing Machine Co., C. W. Blossom, pres., 1170 E. 152 St., 1 story, 200x200 ft., 120x120 ft. and 24x200 ft. factory and office building, to Hadlock Krill Co., 2169 E. 33 St. Est. **$200,000.** CD 4/1—ENR 4/3.

O., Cleveland—FACTORY, etc.—Curtiss Key & Lock Co., c/o M. & H. Abrams, 3219 Carnegie Ave., 1 story, 50x120 ft., brick, steel factory and office building, to C. E. Lewis & Son, 1200 Green Rd. Est. **$40,000.** Awarded 6/26. W. J. Thomas, 3836 Carnegie Ave., archt.

O., Cleveland—FACTORY—McKinney Tool Co., E. W. McKinney, pres., 1688 Arabelle St., 1 story, 85x165 ft., brick, steel factory, to J. L. Hunting Co., Chester-Ninth Bldg. Est. **$50,000.** CD 6/19—ENR 6/26.

O., Cleveland — FACTORY — Superior Die Casting Co., H. Weiss, pres., 17325 Euclid Ave., 2 story, 100x380 ft. factory, 100x120 ft. laboratory, to Austin Co., 16110 Euclid Ave. Est. **$255,000.** Awarded 7/1.

O., Lima—PLANT—Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., remodeling 1 story, brick, steel building, constructing rein.-con. 2 story addn., 3 brick, steel 1 story addns., separate contracts. **$300,000.**

O., Mansfield — FACTORY — Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., 1 story, brick, steel factory addn., separate contracts. **$150,000.** CD 4/28—ENR 5/1.

O., Wellsville—PLANT—Sterling China Co., Wellsville, plant, to Nellis Constr. Co., East Liverpool. **$150,000.** Awarded 6/24. CD 6/13—ENR 6/19.

Pa., Corry—FACTORY—Aero Supply Mfg. Co., Inc., 611 W. Main St., 70x125 ft. brick, steel factory top addn., to Upton Lang Co., 1009 Commerce Bldg., Erie. Est. **$40,000.** CD 6/18—ENR 6/26.

Pa., Ellwood City—MACHINE SHOP—Ellwood City Forge Co., J. A. Evans, pres., 10 St., brick, steel, concrete machine shop, to Pittsburgh Bridge & Iron Wks., Union Bank Bldg., Pittsburgh. Est. **$40,000-$50,000.** C. E. Ziegler, 10 St., engr. CD 6/11—ENR 6/19.

Pa., Erie—BOILER HOUSE—Sisters of St. Joseph of NW, Mother Helena, in charge, 627 E. 27 St., 1 story, 40x40 ft. brick, steel boiler house, to Sebastian Niebauer & Sons, 1046 Browns Ave.***plumbing and heating, low pressure steam to Lakes Eng. Co., 903 Parade St.***electrical work, to Northwest Electric Constr. Co., 323 State St. Est. **$40,000.** W. T. Monahan, 406 Marine Bank Bldg., archt.

Pa., Erie—Robeson Process Co., 1526 E. Lake Rd., 1 story evaporator plant addn., day labor and separate contracts. **$40,000** with equip. CD 6/30—ENR 7/3.

Pa., Lester—PLANT—Westinghouse Electric & Mfg. Co., East Pittsburgh, 2 heavy manufacturing building addns., separate contracts. Approx. **$110,000.**

Pa., Tiona—GARAGE, etc.—Industrial Oil Corp., Tiona and Warren, 1 story garage and warehouse to L. Peterson, 112 N. Irvine St. Warren. Est. **$40,000.**

Pa., York—TERMINAL—York Motor Express Co., York, warehouse and truck terminal, Franiford Ave., separate contracts. **$40,000.** CD 6/26—ENR 7/3.

R. I., Providence—PLANT—Wanshuck Mills Co., 725 Branch Ave., 2 story, 78x80 ft., 80x242 ft., brick, plant addns., to Rowley Constr. Co., 260 Central Ave., Pawtucket. Est. **$100,000.**

Tex., Byron—WAREHOUSE—A. M. Waldop, Byron, 1 story, brick, concrete warehouse, to S. R. Murphy, Byron. **$40,000.** W. E. Nash, Byron, archt.

Tex., Corpus Christi—WAREHOUSE, etc.—Mary Louise McMurray & C. Childers, 2 story, brick, concrete warehouse and storage building, to I. B. McGee, Water and Laguna Sts. **$44,000.**

Tex., Corpus Christi—WAREHOUSE, etc.—Perkins Bros. Co., Corpus Christi, 1 story warehouse and office building, to Aiken & Himnan, 1001 S. Port St. **$40,000.** N. W. Hardy, Nixon Bldg., archt. Matthews & Keenan, Smith Young Tower, San Antonio, engrs.

Tex., Fort Worth — PLANT — Williamson Dickey Co., c/o J. M. Duke, 509 Vickery St., 2 story, brick, steel, concrete manufacturing plant, to W. A. Zant, 1926 Patton Court. **$40,000.** R. P. Woltz, Jr., D. Waggojer Bldg., archt.

Tex., Fort Worth—POWER PLANT, etc.—Texas Christian University, M. E. Sadler, pres., power plant and sys., to Quisle & Andrews, 3320 W. 7 St., **$83,700;** heating, to Hicks & Trimble, 1508 S. Henderson St. **$107,310.** CD 6/16—ENR 6/19.

Tex., Houston — WAREHOUSE, etc. — J. Weingarten, Inc., 808 Prairie St., 137x139 ft., brick, concrete warehouse and storage, to Marshall Constr. Co., 4009 Center St. **$65,000.** CD 2/10—ENR 2/13.

Tex., Longview — PLANT — Lone Star Gas Co., 1915 Wood St., Dallas, c/o R. Lacy, Longview, recycling plant, force account and subcontract. **$309,000.** CD 5/9—ENR 5/15.

Wis., Eau Claire — WAREHOUSE — Kraft Cheese Co., 500 N. Peshtigo St., Chicago, Ill., 1 story, part bsmnt., 54x100 ft., brick, steel warehouse, to L. G. Arnold, Inc., 201 N. Dewey St.

★**Wis., Port Washington**—PLANT—Wisconsin Electric Power Co., 231 W. Michigan St., concrete chimney for electric generating plant, to Heine Chimney & Constr. Co., Chicago, Ill***superstructure, to Dahlman Constr. Co., P. O. Box 1184, Milwaukee***plumbing, to F. C. Kuetemeyer, 783 N. Milwaukee St., Milwaukee. Total est. **$7,100,000.** CD 6/5—ENR 6/12.

Wis., West Allis — YARD ENCLOSURE — Allis-Chalmers Mfg. Co., 1126 S. 70 St., enclose Yard 3, with steel trusses, metal deck, roofing between 2 bldgs., 70x475 ft., to Permanent Constr. Co., 2712 N. Holton St., Milwaukee. Est. **$93,000.** C. E. Meyer, c/o owner, engr.

Ont., Fort William—GRAIN ELEVATOR—Ogilvie Flour Mills Co., Ltd., Front St., 2 million bu. temporary annex at grain elevator, east of Duncan St., to Barnett-McQueen Constr. Co. Ltd., Christina St. About **$150,000.**

Ont., Hamilton — FACTORY — Hutton & Souter, archts., Pigott Bldg., 1 story, 50x90 ft. factory, for Beech Nut Co. of Canada, Sanford Ave. S., to W. H. Cooper Constr. Co., Medical Arts Bldg. Est. **$45,000.** Bids 6/9, awarded 6/24. CD 6/6—ENR 6/12.

★**Ont., Malton**—PLANT—National Steel Car Corp., Ltd., Kenilworth Ave., N., Hamilton, structural steel for plant exten., incl. 2 story, 200x500 ft. building to house machine shop, and 1 story, 50x200 ft. office, to Dominion Bridge Co., Ltd., 1139 Shaw St., Toronto. Total est. **$2,500,000** incl. equip. CD 6/27—ENR 7/3.

OFFICIAL PROPOSALS

Official notices of bids wanted on construction and related work, equipment and material for government, state, municipal departments and private enterprises

RATE: THE RATE FOR OFFICIAL PROPOSAL ADVERTISING IS 50 CENTS PER LINE (OR FRACTION) PER INSERTION
COPY RECEIVED UP TO 12 NOON TUESDAY FOR ISSUE OUT THURSDAY SUBJECT TO SPACE OPEN FOR LAST-MINUTE ADS
SEND COPY TO OFFICIAL PROPOSAL DIVISION, ENGINEERING NEWS-RECORD, 330 W. 42ND ST., NEW YORK, N. Y.

Bids: July 16 (387)

State Highway Work

STATE DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
ALBANY, N. Y.

Sealed proposals will be received by the undersigned at the State Office Building, 13th Floor, Albany, N. Y., until one o'clock p. m., advanced standard time, which is twelve o'clock noon, eastern standard time, on WEDNESDAY, JULY 16, 1941, for the following highway and bridge projects:

RECONSTRUCTION

County	Deposit for plans	Bid deposit	Type	Miles
Chautauqua	$5	$3,500	42.5' to 80' MMO. 40.5' to 42.5' Concrete 9"	0.71
Delaware	5	13,500	Concrete	2.97
Erie — Niagara	5	3,000	Painting Bridges	....
Essex	5	3,000	32' I-Beam; Concrete Approach	0.42
Jefferson	5	7,000	Concrete	2.13

CONSTRUCTION & RECONSTRUCTION

Oneida	10	21,500	46' Div. Lane Concrete Misc. Work	2.67
Oswego	10	32,000	Concrete	7.03

Maps, plans, specifications, and estimates may be obtained at the office of the Division of Highways, Albany, N. Y., and at the office of the District Engineers in whose districts the roads are located. The names and addresses of the District Engineers and counties in their districts will be furnished upon request, and may be seen at the office of the State Department of Public Works, State Office Building, Worth and Center Streets, New York City.

The deposit for Plans and Proposal Forms for each contract containing 1 to 15 sheets is $5.00; 16 to 30 sheets, $10.00; over 30 sheets, $20.00. A refund will be made in full to bidders for return of one set, in good condition, within 30 days of award, or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

Special attention of bidders is called to "General Information for Bidders" in the proposal, specifications, and contract agreement, and to the special provisions applying to projects financed with federal funds.

Proposal for each contract must be submitted in a separate sealed enveloped with the name and number of the contract plainly endorsed on the outside of the envelope. Each proposal must be accompanied by cash, draft or certified check payable to the order of "State of New York, Division of the Treasury," for the sum as specified in the advertisement and the proposal. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instructions to Bidders."

When optional types are permitted on contracts with federal funds, bidders must state in the space provided in the proposal the exact designation of the optional type upon which the proposal is predicated.

Minimum Wage Rate per hour for above work shall be as follows:

County	Skilled Labor	Intermediate Grade Labor	Unskilled Labor
Chautauqua	.75	.65	.65
Delaware	.75	.55	.45
Erie	.75	.75	.75
Essex	.75	.55	.50
Jefferson	.75	.55	.55
Niagara	.75	.75	.75
Oneida	.75	.60	.60
Oswego	.75	.60	.60

UNLESS SHOWN OTHERWISE IN THE ITEMIZED PROPOSAL FOR EACH PROJECT.

The right is reserved to reject any or all bids.

A. W. BRANDT,
Supt. of Public Works.

Bids: August 7 (409)

Subway Station

CITY OF CHICAGO STATE STREET SUBWAY
CONTRACTS F-1, F-2 AND F-3.

Sealed bids, endorsed "PROPOSALS FOR STATION FINISH, CONTRACTS F-1, F-2 AND F-3," will be received by the City of Chicago, in the County of Cook and State of Illinois, at the office of the Commissioner of Subways and Superhighways, Room 1940, 20 N. Wacker Drive, Chicago, Illinois, until 1 o'clock P.M., Central Standard Time (being 2 o'clock P. M., Chicago Daylight Saving Time), on Thursday, August 7th, 1941, at which place and time all such proposals will be opened publicly and read aloud by a representative of the Commissioner of Subways and Superhighways.

The work for which such proposals are invited is covered by 4 contracts, Contract F-1, Contract F-2, Contract F-3 and Contract F-1, F-2 and F-3 Combined. Proposals may be submitted on any one or more of these contracts.

The work under Contract F-1 consists of building a station superstructure and the furnishing and placing of colored concrete floors and stairs and other concrete; structural glass, terra cotta, glazed tile and marble wall finishes; partitions; painting; plumbing; heating and ventilating; electric conduits and outlets; together with all other work included in the installation of the station finish in 3 stations and 1 auxiliary station, as specified in the Contract Documents and shown on the plans. The work is located in N. State Street and N. Clybourn Avenue, in the city of Chicago, as described in more detail in the Requirements for Bidding and Instructions to Bidders.

The work under Contract F-2 consists of furnishing and placing the materials described under Contract F-1 in 3 stations and 1 auxiliary station, as specified in the Contract Documents and shown on the plans. The work is located in S. State Street and W. Division Street, in the city of Chicago, as described in more detail in the Requirements for Bidding and Instructions to Bidders.

The work under Contract F-3 consists of furnishing and placing the materials described under Contract F-1 in 8 stations, as specified in the Contract Documents and shown on the plans. The work is located in N. and S. State Street, in the city of Chicago, as described in more detail in the Requirements for Bidding and Instructions to Bidders.

The work under Contract F-1, F-2 and F-3 Combined consists of constructing all of the work and of furnishing and placing the materials above set forth in the description of the work under Contract F-1, Contract F-2 and Contract F-3. All of the station finish work is to be performed within certain subway structures built or to be built as shown on the plans.

All bids must be made upon blank forms of proposal as furnished by the Commissioner of Subways and Superhighways and included in the Contract Documents, and shall be made in accordance with the provisions contained in said documents.

The successful bidder will be required to furnish, execute, and deliver to the Commissioner of Subways and Superhighways, a performance bond satisfactory to the Commissioner of Subways and Superhighways in the amount and within the period of time set out in the Contract Documents.

The Contract Documents, including Standard Specifications for Subway Construction, Contract Requirements and Contract Plans, are on file and available to bidders at the office of the Commissioner of Subways and Superhighways at Room 1940, 20 N. Wacker Drive, Chicago, Illinois. Copies of the Contract Documents may be obtained by depositing Twenty-five Dollars ($25.00) with the Commissioner of Subways and Superhighways, for each set of documents. The amount of the deposit for one set of documents will be refunded to each actual bidder who returns the said documents in good condition within ten (10) calendar days after the opening of bids Fifteen Dollars ($15.00) will be refunded for each of all other sets of documents so returned.

The Commissioner of Subways and Superhighways has issued a "Standard Specifications for Subway Construction," dated February, 1940. A copy of these specifications will be issued to each prospective bidder obtaining copies of the Contract Documents.

The Commissioner of Subways and Superhighways (formerly the Commissioner of Subways and Traction) has issued a "Manual of Paints and Other Coatings for Subway Structures" pertaining to certain work required under the contract. The original and copies thereof are on file at the office of the Commissioner and are available for examination by prospective bidders.

Each proposal must be accompanied by cash or a certified check drawn on some responsible bank doing business in the city of Chicago, in the amount of Ten Thousand Dollars ($10,000.00) for Contract F-1, Six Thousand Dollars ($6,000.00) for Contract F-2, Eighteen Thousand Dollars ($18,000.00) for Contract F-3 and Thirty-four Thousand Dollars ($34,000.00) for Contract F-1, F-2 and F-3 Combined, such checks to be payable to the order of the City of Chicago. A total deposit of Thirty-four Thousand Dollars ($34,000.00) will entitle a bidder to submit a proposal on Contract F-1, Contract F-2, Contract F-3 and on Contract F-1, F-2 and F-3 Combined. Any proposal submitted without being accompanied by such cash or certified check may be considered informal and consequently may be rejected.

The City of Chicago reserves the right to reject any or all bids and to disregard any informalities in the bids and bidding.

No bid may be withdrawn, after the scheduled closing time for receipt of bids, for at least forty-five (45) calendar days.

CITY OF CHICAGO,
By PHILIP HARRINGTON,
Commissioner of Subways and Superhighways.

Chicago, Illinois, July 8, 1941.

Make Plans Accessible to Distant Bidders

Plans and specifications for inspection by distant bidders may be filed at any of **Engineering News-Record** offices (without charge). Or a sufficient supply may be deposited at such of our offices as seem desirable, subject to your usual requirements in the matter of deposits, etc. (We assume full responsibility for return of plans or deposits). This cooperation is made available to advertisers in the Official Proposal column of **Engineering News-Record** to facilitate the offering of bids by principals located in distant areas.